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# PRACTICAL HINTS ON THE TREATMENT OF DISSEMINATE NEURODERMATITIS*

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The clinical features of disseminate neurodermatitis are familiar to dermatologists and have always been of interest to allergists and pediatricians. Recognized and described by Vidal about 1886, and by Brocq and Jacquet in 1891, the disease, designated by the latter as diffuse pruritus with lichenification, has long been known as a clinical entity under various names: diffuse neurodermatitis, late exudative eczematoide of Rost, allergic dermatitis, and more recently—to conform with Coca's conception of atopy—atopic dermatitis.

The dermatosis is not an eczema and such designations as "flexural eczema" and "allergic eczema" should be discarded with reference to neurodermatitis. One source of confusion merits emphasis; namely, the fact that various manifestations of *circumscribed* pruritus with lichenification, lichen simplex chronicus, is pathogenetically unrelated to disseminate neurodermatitis; for one reason, the allergic and immunologic features peculiar to the diffuse form are usually lacking in the circumscribed, isolated forms.

My interest in the disease was aroused over thirty years ago, during my first week as an interne at the New York Skin and Cancer Hospital. In that first week, I learned that neither Fox, nor Bulkley, nor Whitehouse, nor Aitken seemed to make much of a hit with patients afflicted with this eruption. That was 'way back in 1905. Now, in 1936, after so many years of listening to papers, reading articles—and even writing articles myself—about the disease, picture my chagrin at having to admit that my neurodermatitis patients regard me with no more favor than did such patients regard my old teachers.

I believe that some of our younger colleagues harbor the idea that the intimate relationship between disseminate neurodermatitis and the asthma-hay fever complex is a clinical observation of recent times. To the contrary, dermatologists have been aware of this relationship for many years. Cazenave mentioned it in 1844. Brocq and his pupils, beginning about the year 1891, published a series of monographs in which the relationship was stressed. In this country, Bulkley directed attention to the coincidence of eczema, hay fever and asthma, in a book on eczema, published in 1901.‡ In 1919 and again in 1923, I made an attempt to stimulate interest in the subject with two articles, one of which included an abstract of Brocq's original contributions, which had received but little publicity in this country, up to that time. In these papers, I mentioned the obvious clinical and morphologic

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†See page 348, "Among Our Contributors."

‡Eczema; with an Analysis of 8,000 Cases of the Disease, p. 41. G. P. Putnam's Sons. The Knickerbocker Press, New York, 1901.

differences between the circumscribed and disseminate varieties of neurodermatitis and of primary and secondary lichenification. In recent years, noteworthy contributions have been made by Rost, Ormsby, Stokes, Peck, Van de Erve, Becker, Obermayer, and Sulzberger and his co-authors. Allergists and pediatricians also—Coca, Rackemann, Hill and others—have recorded their interesting observations in recent publications.

Coca propounded the concept of atopy. Today we know that in approximately 50 per cent of patients with diffuse neurodermatitis, there is a definite family or personal history of allergy or atopy, or both, roughly corresponding with the incidence in hay fever, asthma and vasomotor rhinitis patients. In other words, disseminate neurodermatitis is in all probability an allergoderma (Perutz).

Von Pirquet, in 1906, coined the word allergy. His definition of the term has been translated as "a specifically altered state produced by previous exposure, and made manifest by subsequent exposure to the same (or some closely related) substance." This definition has been subjected to considerable embellishment, modification and even distortion; but—in the opinion of experts—it fulfills all the requirements for an understanding and working hypothesis of the concept of allergy with respect to skin (and other) diseases. Coca defined atopy as "certain clinical forms of human hypersensitiveness that do not occur, as far as is known, in the lower animals, and which are subject to hereditary influence."

My main object in recalling to you the definitions of these familiar concepts is to emphasize the fact that a comprehension of their significance and a utilization of their principles has proved of little practical value, in my hands, in the treatment of patients with disseminate neurodermatitis. Mind you, I am speaking for myself only; other clinicians, judging from their reports, seem to have been more successful. In my experience, elimination procedures directed against well established allergic manifestations, have thus far proved unsatisfactory, with the possible exception of isolated cases which improve after complete change of environment. Nevertheless, I fully appreciate the paramount importance of the role played by allergy, and the full significance of the immunologic features of the disease impresses me as much as it does the allergist. But unfortunately, I can recall not a single patient with disseminate neurodermatitis, who, willing enough to run the whole gamut of "anti-allergic" procedures, had enough fortitude to refrain from topical applications of antipruritic and anti-inflammatory remedies, or administration of radiation therapy. In the evaluation of therapeutic results obtained by means of food eliminations, specific and non-specific desensitization procedures and so forth, the palliative and even curative action of topical remedies cannot, it seems to me, be ignored. Nearly all patients have periods of remission and exacerbation, usually without discoverable cause. Some patients recover with treatment, others without treatment, and still others despite treatment. Spontaneous recovery is by no means infrequent. That there are instances of seasonal recurrences and exacerbations, and that *some* patients are relieved and even cured by elimination of certain foods, inhalants and other allergens, is an established fact. But I have the distinct impression that the one great factor instrumental in the relief and cure of such cases is the onward passage of *time*—lots of time!

The approach to therapy so nicely outlined by Stokes, Becker and others already mentioned, promises to become a decidedly useful *adjuvant* in the management of the dermatosis. I believe that patients, whenever possible, should be treated by the neurologist in intimate coöperation with the dermatologist. But for the dermatologist alone to carry out the treatment recommended by those who emphasize the neuropsychogenic features, is not an easy job. I, myself, find it impossible of accomplishment. I have too much of other work on my hands.

I recall an intelligent, middle-aged lady in private practice, whose attacks of widely disseminated neurodermatitis occurred almost exclusively on the not infrequent occasions when her husband took himself off on an alcoholic debauch. Definite manifestations of both atopy and allergy were linked with her dermatosis, but that made no difference; the skin cleared up nicely in the intervals between her husband's indiscretions, despite the fact that all other elements implicit in her allergic manifestations retained their *status quo*. She had many positive

and many negative cutaneous tests, carried out my instructions faithfully, but all to no avail: when hubby got drunk, she broke out again and again. She took up an awful lot of my time and at one of her visits, in desperation, I re-read a certain article, mused over its contents for a while, scratched my head, and advised her to divorce her husband. That occasion was her last visit to my office.

To me it appears that therapy based chiefly on the neurogenic and emotional features is applicable mostly to well-to-do patients who can afford to indulge in such luxuries as consultants, hospital rooms, nurses, and doctors who have plenty of time.

What is to be said, then, about our dispensary cases, most of whom are supposed to work for a living? In a clinic in which it is not unusual to attend to two hundred to two hundred and fifty patients in a short afternoon, we barely have enough time properly to fill in the various items in our case-charts. If we succeed in eliciting a fairly definite history of infantile eczema and subsequent attacks of neurodermatitis during childhood and adolescence, we reckon we've accomplished something at the patient's initial visit. These people want relief and want it quickly. Perhaps one out of a hundred is willing or able to stop work and can afford hospitalization. A certain proportion gladly submits to scratch, patch and other laboratory tests and when these are completed they ask naïvely, "what next?" Then one scans the laboratory reports, maps out a plan of therapy conforming to such reports, instructs the patient to return at certain intervals and finally winds up by prescribing almost the identical remedies that one prescribed prior to the report of the laboratory findings. While this may seem somewhat of an exaggeration, it certainly holds true for the average dispensary patient.

When combined with other remedies, treatment directed toward endocrine dysfunctions seems, in selected cases, to have had some measure of success. The detection and possible elimination of foci of infection and the role played by gastro-intestinal disturbances must always be borne in mind. Fairly satisfactory results have occasionally been obtained by medication directed toward the autonomic nervous system. Brack called attention to the value of such remedies as pilocarpine, atropine, ergotamine and yohimbin. In this connection I quote from Goldsmith's recent book:

> "Kraus and Zondek grouped together the vegetative nervous system, the hormonal apparatus and the shifting of electrolytes in the cells under the term 'the vegetative system.' Between these groups of functions there is such close reciprocity and mutual dependence that there is probably also a special ease of transformation of one type of energy into another, enabling them to act as substitutes for each other vicariously. It is further obvious that the affective (psychical) energies have the closest reciprocal connection both with the autonomic nervous system and with hormonal circulation. The affective sphere can therefore be included as a further partner in the vegetative system. There are no psychogenic diseases, *sui generis,* recognizable as such at sight. But that pathological cutaneous phenomena are conditioned by the psychical state, in their development, course and curability, is undeniable."

From the foregoing statements one may adduce the logical conclusion that disseminate neurodermatitis is a disease having a complex and probably variable pathogenesis and that its adequate treatment requires knowledge of the entire field of medicine, instead of only the specialistic learning of the dermatologist, the allergist, the psychoneurologist and the endocrinologist.

Alleviation and relief of itching and inflammation are the primary objects of active therapy. To accomplish these, the skill of the dermatologist in the use of antipruritic and sedative remedies is an essential requirement. Remedial measures may be grouped under the heads of (1) general remedies, (2) specific remedies, (3) non-specific remedies. Under the head of general therapy are included the following procedures: the use of restraining jackets or splints or strapping, to prevent scratching; removal to a different environment; rest in bed; the administration of sedatives and hypnotics; balneotherapy and neuro-psychotherapy. Specific remedies embrace elimination of suspected foods and inhalants and the administration of specific desensitizing (or hyposensitizing) agents to combat the existing allergic manifestations. (I have had no experience with allergen-free chambers.) Nonspecific procedures include internal, parenteral and topical remedies.

Drugs employed with varying degrees of success are strontium bromide combined with 20 per cent glucose solution administered intravenously; pilocarpine hydrochloride, injected in a one per cent solution in daily ascending dosage; atropine sulphate,

beginning with 1/200 to 1/100 of a grain, and stepping the dose up gradually to the dosis tolerata; ephedrine and the combination of ephedrine and amytal; bromides and phenobarbital; various calcium preparations are employed in large dosages, both orally and intravenously; sodium thiosulphate and calcium thiosulphate given intravenously are sometimes effective. An aqueous solution of lobeline sulphate is recommended for trial by Dr. Ramirez of New York. It is administered subcutaneously in daily doses of 3/20 of a grain. In chronic cases, with pronounced lichenification, arsenic should be given a thorough trial. With such remedies as "aolan" and milk injections, and with a turpentine product called "olobintin," I have had no beneficial results. I tried a product called "eschatin," a cortical hormone extract, in four patients recently, without effect on the itching or the eruption, nor have I encountered patients showing definite effects from thyroid therapy, with respect to itching and inflammation. I have had no experience with hydrochloric acid medication. Autohemotherapy seems to me to be of very limited value, but should be given a trial. Spinal puncture is said to be of value to combat the itching, but I have had no experience with this procedure.

At one time I thought that pilocarpine seemed to exert more beneficial effects on itching than any of the other remedies mentioned. Later I discovered that some patients responded much better to the antagonist of pilocarpine, namely atropine. The indications for either of these drugs, as pointed out among others by Brack, are difficult to determine, as a rule. Theoretically, pilocarpine is sometimes efficacious in patients showing overactivity of the sympathetics, associated with rapid pulse, dilated pupils, hypoacidity, atonic constipation and hyperadrenalemia. Atropine on the other hand paralyzes the parasympathetic nervous system and is therefore indicated in the so-called vagotonic state, which is associated with atopy and with evidences of overactivity of the vagus, such as eosinophilia, bradycardia, contracted pupils, calcium deficiency, hyperacidity and spastic constipation. As our knowledge of the specific action of most drugs on the autonomic nervous system is at best vague and incomplete, the use of pilocarpine and atropine in neurodermatitis, is still empiric. This is partly accounted for by the fact that hyperexcitability and hypoexcitability of the sympathetic nervous system may occur at different times in the same individual.

In the category of direct antipruritic agents, the employment of splints on the extremities and of restraining jackets‡ for both infants and adults, is of great value. These contrivances are more effective in combating the vicious circle of itching and scratching, with their resultant exacerbations, than any single remedy. Patients who protest against their use at first, later accept them with equanimity. The majority of patients need apply them only at night, but in some instances, constant restraint is indicated.

Roentgen and ultraviolet therapy are next in order of effectiveness as antipruritic agents. I employ these remedies as routine measures, especially in patients in their initial attacks. Alternation of Roentgen and ultraviolet exposures at succeeding bi-weekly visits, is often helpful. In patients who have had their full measure of Roentgen ray therapy in one or two courses, further radiation apparently has no merit and might prove dangerous, even after a long interval. Ultraviolet helps some patients and makes some worse.

Wet dressings and antipruritic lotions are indicated in the large majority of patients. Ointments or pastes are used in cases with secondary eczematization, pyodermic infection and dry, infiltrated lichenification, as in ordinary eczema. For wet dressings, I use solutions of diluted liquor Burowi, boric acid and potassium permanganate. My favorite shake lotions are calamine and zinc lotion and liquor Burowi lotion; the formula for the latter is as follows: Liq. Burowi 30.0, Zinc oxide and Talcum, aa 60.0, Glycerine 48.0, Lime water, q. s. ad 240.0. Constant use of these lotions often causes too much drying of the skin; when that occurs, I substitute Pusey's calamine and zinc oxide liniment, or use the latter alternating with one of the others.

Incorporated with these lotions are the following antipruritics, each of which may be used alone or in combination: menthol, camphor-chloral, liquor carbonis detergens, resorcin, and in limited areas, phenol in 2 to

‡Goldman, L.:A restraining jacket for the prevention of scratching. Arch. Dermat. and Syph., 33:2, 349, (Feb.) 1936.

4 per cent strength. When these fail to stop itching, benzocaine, from 6 to 10 per cent strength, should be added. As benzocaine sometimes acts as a sensitizer, it is wise to do a patch test with it, a day or so before its application, to determine the patient's sensitivity. Under any circumstances, benzocaine compounds should be confined to only small areas of the cutaneous surface at a given time, on account of the danger of absorption of the drug.

Baths containing starch, bran, tar preparations, potassium permanganate and so forth, are of little real value. Their usefulness can be determined only by trial and error. Sea bathing and moderate exposure to sunlight seem to benefit individual cases.

One of the most important factors in the alleviation of symptoms is the adequate and meticulous application of topical remedies. Nurses and orderlies are usually remiss and careless in performing this job. The wet dressings should consist of light weight wrappings of gauze, and should be kept constantly moistened. Shake lotions should be painted on all non-hairy areas with a flat varnish brush of good quality and applications should be made as frequently as every two or three hours. Restraining contrivances should be inspected several times during the night, as patients are prone to remove them while half asleep. When the solid constituents of shake lotions become caked on the skin, removal with warm boric acid solution should be patiently carried out. In a nut shell, good nursing is one of the essential factors in adequate treatment.

In conclusion, let me say that I am quite aware that nothing new, or "hitherto unpublished" has been offered in this paper. What I have tried to do, is to present the subject in a somewhat broader frame than has been done in recent publications, in the hope that it might be a short step toward a "systematization of confusion."

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A complete bibliography and references to literature herein mentioned may be found in a review of Allergy in Dermatology, by Sulzberger, in *The Journal of Allergy*, Volume 7, No. 4, p. 385, May, 1936.

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## APPARATUS FOR PSYCHOPHYSICAL TESTING OF AUTOMOBILE DRIVERS*

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In order to carry out proper exact testing procedure in evaluating the functional capacity of automobile drivers to handle a motor car properly, much apparatus has been devised or modified for the Psychopathic Clinic of the Recorder's Court. Nineteen different psychophysical and visual tests are used, combined with a physical and a psychiatric examination. Two new modifications of driver testing apparatus have been built.

1. The reactograph, built by C. A. Parkin, which is a combination of the reaction time apparatus used by Lauer and Weiss,[2] DeSilva,[1] and Myers,[3] and the drivo-graph devised by Lauer and Weiss[2] and Myers.[3] The advantage of this apparatus is that it turns out a written record of simple braking reaction time and of steering ability. Blood pressure and respiration are simultaneously recorded by an air-pressure system (c). The recording device is shown in Figure 1. Knob (*A*) is turned following a timed pattern and moves a stimulus (*D*) arrow shown in the front of the reactograph seen to the left of Figure 2. The steering wheel moves an opposite arrow. A reducing gear moves a stylograph pen or pencil over the paper pulled over platen (*B*) by a constant speed motor. A marking pen or pencil (*C*) presses on the moving paper when a red light stimulus (*F*) is given and a similar marker is depressed when the contact is closed by the brake pedal. There is a time marker enabling reaction time and driving response to be measured in hundredths of a second, although tenths of a second are sufficiently accurate for practical purposes.

Figure 2, also shows a test table modified from the apparatus devised by Viteles[4] and McCarter of Cleveland. The individual being tested drives a small car (*X*), regulat-

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†See page 348, "Among Our Contributors."

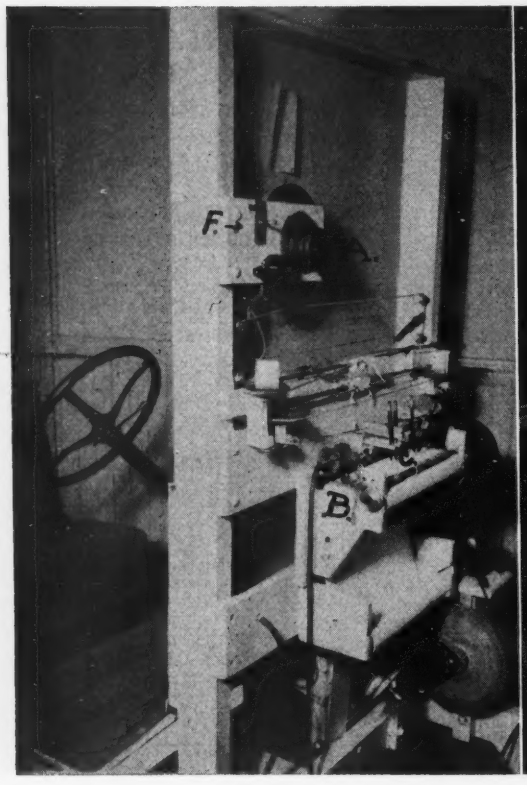


Fig. 1.

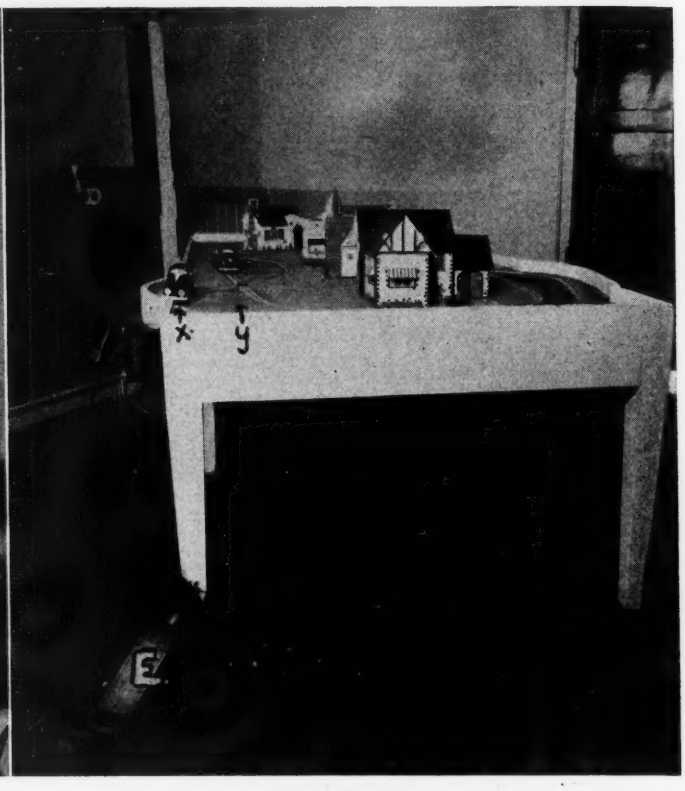


Fig. 2.

ing its speed and stopping it by use of the accelerator ($E$). A second car ($Y$) is under the control of the examiner and runs at a constant speed. The photograph shows that about one-sixth of the track is masked by cardboard houses, thus making it necessary for the patient to make quick judgments of speed in impending accident situations. There are five places where the cars cannot pass and after three test trips around the track the patient must gauge his own speed and that of the experimenter's car so that he will operate his car in order that they will not collide at these danger points. Each machine is standardized on good, violations-prone, and accident-prone drivers. These apparatus are only used as part of the whole battery of tests and are not diagnostic in themselves, but grossly poor responses on them have been found to be indicative of emotional, intellectual, and physical disabilities which later on are broken down and analyzed by other examination technics and are an aid to the diagnosis and determination of prognosis of driving maladjustment.

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# UREA: ITS USE IN INFECTIONS

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In 1923 the writer[3] reported a series of thirty-one cases of osteomyelitis affecting various bones of the body, and in five of which he was able to trace, chronic recurrent lesions developed. The mode of treatment followed was surgical incision and drainage. Some were treated with the Dakin solution technic and some by simple saucerization and drainage. In the early cases good results were obtained in about six weeks, but it seemed that once a case went beyond that period it became chronic and necessitated further operative procedures.

Baer[2] developed the treaement of osteomyelitis by the so-called maggot procedure, which proved very successful in his hands in a large percentage of cases. The drawback was the objection of the patient to the sensation of the crawling maggots and the difficulty in obtaining and applying the maggots; the patient required special nursing and care.

Winnett Orr[4] reported his well-known treatment of osteomyelitis consisting of immobilization and packing of the thoroughly saucerized lesions with vaselinized gauze and application of plaster-of-Paris cast with very infrequent changes.

Fred Albee[1] thought that the successful outcome of the treatment of infections of bone by the Orr method was due to the presence of bacteriophage in the wound, and in the wounds that did not heal well he demonstrated the absence of bacteriophage in appreciable quantities. He thought that when he applied bacteriophage to the wound in those cases his results became very gratifying. There is probably no place in surgery that is as trying for the patient, as well as the surgeon, as infections of bone tissue. Chemical sterilization of the wound, plus a thorough mechanical debriment is possible in very early infections only. Many infected wounds seem to become immune to chemical sterilization and a happy medium where the strength of the antiseptic solution is just sufficient to sterilize the infected wound and help to carry away the debris is impossible to find. Either the solution seems to be too weak, or if strong enough, it seems to retard or arrest healthy repair of the wound.

William Robinson[6] reported that allantoin, which occurs in maggot excretions, affected the healing of wounds of indolent or chronic character. It was found by him that urea, which is also present in maggot excretion, has similar effects to allantoin. The urea has an extremely wide distribution and may be prepared synthetically. He reported, in collaboration with many physicians, various infections treated with 2 per cent urea solution. The solution is bland, stable and non-toxic, and apparently has no ill effects upon the surrounding tissue. It is not an antiseptic, for germs can be easily conveyed in a strong solution of urea. It is easily soluble in distilled water and does not seem to possess proteolytic properties. Its main property seems to be a stimulus to proliferation of the cells of granulating tissue and increased development of capillaries. (The use of urine, which contains normally about two per cent urea, as a healing fluid has been resorted to for many centuries in Europe, Asia and Africa.) Robinson[5] advocates the use of a two per cent solution, which is obtained by dissolving the crystals in distilled water. The tissues must be kept constantly in touch with the urea solution and the best way to obtain it is by keeping wicks of gauze in the wounds and pockets of the wounds, frequently moistening the gauze with the urea solution. I have used it in much stronger solution than two per cent in especially indolent wounds, and in several cases to be quoted I have used it by filling the wound with urea crystals.

*Case 1.*—Boy, nine years of age, gave a history of injury to the left foot two months prior. He was treated expectantly and with hot applications by his physician. About three weeks following his injury, he developed a discharging sinus which kept on draining and closed periodically.

When seen by me he had a swollen left foot, extremely tender dorsal region, which upon x-ray examination proved to be osteomyelitis of the third metatarsal. He was operated on August 10, 1936. The metatarsal was partially removed subperiostally, the wound was packed with vaselinized gauze and a plaster-of-Paris cast applied to the left extremity

†See page 348, "Among Our Contributors."

below the knee. The cast was bivalved in six weeks. The foot appeared less swollen, there was no tenderness, but there was still a discharging sinus. Frequent installations of two per cent urea into the fistulous tract caused a complete healing within two weeks. An x-ray re-examination on October 8, with the report that the part of the bone that was left was free from infection and that there were no areas of bone destruction seen. There was apparently some bone regeneration.

*Case 2.*—Girl, fourteen years of age, gave a history of injury, left iliac region, about a year prior to entrance to the hospital. At the time she entered the hospital, she complained of a tumor mass in the left lower abdominal wall. The ileum was not tender, neither was the mass. The mass grew slowly and began to appear about three months before entering the hospital. Six months prior she was operated on for appendicitis, due to some vague pains in her lower abdomen.

An x-ray examination disclosed no pathology of either the bones of the spine or the pelvic bones. An exploratory operation was done on July 27, 1936, at which time a sero-sanginous fluid was evacuated from the mass which had many pockets—the fluid did not have any odor. The fibrous tissue forming and limiting the lesion was resected, which included a great deal of fibrosed muscle tissue. When the mass was finally resected and fluid removed, the empty space under the superficial fascia would admit a fist easily. The peritoneal cavity was not entered. The wound was closed in the usual manner with drains. The patient was kept in the hospital for several weeks with a discharging sinus, developing from the incision to within an inch of the crest of the ileum. The wound was treated with Dakin solution without any results. It was scraped several times without any results. Sclerosing solutions injected into the wounds produced no results. Finally a two per cent urea solution was attempted with the following technic: A wick of gauze was introduced from one end of the fistulous tract to the other end, leading out from the old drainage wound in the midline. Frequent soaking of the wick was resorted to with a two per cent urea solution. The fistulous tract became smaller and smaller, the wick was finally removed and frequent installations of the urea solution were resorted to. The wound healed completely in three weeks following the use of urea solution.

*Case 3.*—Man, sixty-two years of age, had received a fracture of the hip about a year ago. On September 7, he sustained a compound comminuted fracture of the left fibula and tibia. The operative record shows that he had a large wound leading from the external surface of the right leg inward, and over the ankle and extending for about two-thirds the length of the leg. The wound was partially sutured and was exuding an ill-smelling, bloody discharge with pus. A Kirschner pin was put through the os calcis, the sutures were removed and a cradle with electric lights was put over the wound without any dressing. There was a continuous discharge from the wound for several weeks. X-ray of the fragments showed good apposition but no signs of callus. The wound was then Dakinized without any appreciable results. The wound appeared angry, fragments of the bone were visible and discharge was profuse. In the latter part of December a solution of urea, two per cent was applied, continuously wetting the gauze over the wound. The result was almost miraculous. The wound became clean in less than a week and healthy granulation tissue appeared, coming in from all edges of the wound. From then on the wound healed, and on February 5 the extremity was put in a plaster-of-Paris dressing and the x-ray report showed good apposition and beginning callus formation. Splenic extract[7] was used on this case to stimulate callus formation.

*Case 4.*—On July 6, 1936, a resection of a blue dome cyst of the right breast was done on a woman forty-five years of age; the breast was not resected. Patient went home in ten days and later reported with a tumefaction in the region of the operation. The mass was incised, foul smelling pus was evacuated; drainage was instituted. The pus drainage subsided in a couple of weeks but a sinus remained with a gaping wound that did not heal. Various agents were tried and the patient was told that an operation would have to be done to stimulate wound repair. However, the wound was filled with urea crystals and a dressing put over the wound and the patient was instructed to instill ten per cent urea solution into the wound several times daily. The wound began to heal very rapidly and closed entirely within three weeks.

*Case 5.*—Young man, thirty years of age, with a chronic ischiorectal abscess which was operated on in January, 1937. The abscess contained many pockets. The abscess was opened, the pockets were resected, the wound was packed loosely with gauze and moistened frequently with two per cent urea solution, and every third day the wound was filled with crystals of urea. Complete healing occurred in six weeks.

*Case 6.*—Woman, about fifty years of age, gave a history of frequent abdominal attacks. When examined there was a mass in the lower abdomen which moved with the uterus. Mass was painful, uterus appeared somewhat frozen, there was an infiltration of the right and left vaults. The blood count was 11,500 with 80 per cent polys. The bowels moved with great difficulty and only with enemas. There was no vomiting, temperature ranged from 98 to 100. The condition existed for several months. An exploratory laparotomy disclosed a retrocecal, subacute inflammed appendix with an old abscess leading to the uterus and involving the uterine body. The abscessed cavity was the size of a fetal head. The appendix was removed, the abdomen drained and part of the uterine wall was removed for a biopsy, which showed an active and inflammatory and infiltrating process of the muscle wall. Following the removal of the drains, a chronic sinus developed leading into the lower abdomen. Instillation with two per cent urea resulted in a quickly clearing of the wound and healthy granulation tissue appeared. Complete healing within three weeks following the use of two per cent urea solution.

*Case 7.*—Man, fifty-six years of age, was operated on November 26, 1936, for an acute exacerbation of chronic appendix. Patient did well and was to be discharged on the eleventh day, when upon removal of his sutures his wound opened up and several loops of small bowel came through. He was given an anesthetic, bowel reduced and the wound resutured. Inspection of the wound on the fourth day following resuturing, tenth day following resuture, and fourteenth day following resuture failed to disclose any union. There was no distention; there was no drainage except a slight sero-sanguinous discharge. On the seventeenth day following the resuture, the wound was slightly packed with gauze wicks and the patient was instructed to keep the wicks saturated constantly with a solution of urea by the drop method. On the twenty-fourth day

following the resuture there was good union in the upper and lower parts of the wound. The sutures were removed, the wound was still kept packed lightly with saturated solution of urea. Four weeks following the resuture, patient left the hospital with the wound firmly healed with no evidence of a herniation.

*Case 8.*—The patient was a man about sixty years of age, with a very extensive carbuncle of the posterior neck, practically embracing the entire posterior portion of the neck. He was a diabetic. An extensive resection with diathermy of the affected area was done, leaving a large surface exuding pus. On the third day following the operation, gauze wicks soaked in two per cent urea were used. The wound rapidly closed; skin graft was done on the third week following the operation. The wound healed rapidly with most of the graft taken. Some of the grafts were lost, due to faulty immobilization.

### Remarks

There were many other cases treated with urea solution that showed a tendency to become indolent. It is my custom now to treat all discharging wounds by the method outlined, not fearing the use of crystals if the lower percentage of the solution does not give results.


### Summary

Eight cases were presented in which the use of urea, according to the method outlined by Robinson were presented. The use of pure crystals has been resorted to in very indolent cases with apparently good results. There were two failures not reported above, but which could not be blamed on the solution, as both of these cases were in which sinus leading to osteomyelitic processes, and which have not been freshly operated on. Both of these patients were advised to have a saucerization operation with subsequent treatment.

It seems reasonable to assume that a new and very potent factor in the healing of indolent wounds has been added to the armamentarium of the surgeon.


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## INFANTILE AMAUROTIC FAMILY IDIOCY (TAY-SACHS' DISEASE) OF NON-JEWISH PARENTAGE*


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As is the case in most of the disease entities that appear to have exclusive racial predilection, infantile amaurotic idiocy has its rare exceptions. Following the earlier observations of Tay[23] and Sachs,[18] it seemed that this fatal malady was entirely limited to the Hebrew race and, subsequently, the occurrence of occasional bona fide instances of non-Jewish origin mitigated but little against this striking predisposition. Up to the present time, fifteen true instances of this disease in non-Jewish families have been recorded,[2, 3, 4, 5, 6, 7, 9, 12, 13, 16, 17, 19, 22, 24, 26] three of which were substantiated by the characteristic post-mortem findings. It is interesting to note that this group contains a report of the occurrence of the disease in a Japanese family.[4] It is probable that if all cases of acute cerebral degeneration in infants were more carefully studied, a larger number of racial exceptions would be uncovered. This carries with it the implication that careful ophthalmoscopic examination, which contains the key to the diagnosis, should be religiously performed in all such cases. In this connection, it seems profitable to briefly discuss the outstanding features of this condition illustrating its occurrence in a non-Jewish family with an observed case.

The onset of the disease occurs usually at about the age of six months with the gradual development of listlessness and muscular weakness. The infant up to this time gives evidence of normal progress. With a loss of power to hold up its head or to sit up, complete paralysis either of the flaccid or spastic type sets in. Hyperacusis, an inordi-

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†See page 348, "Among Our Contributors."

nate sensitivity to auditory stimuli, may become a prominent symptom. Towards the latter part of the course of the disease, epileptiform seizures, clinical manifestations resembling decerebrate rigidity, and bulbar symptoms with drooling and respiratory difficulty may make their appearance. Blindness, of course, is an outstanding feature and ophthalmoscopic examination will reveal the pathognomonic cherry-red spot in the region of the macula lutea. This cherry-red spot is usually found in the center of a more or less round milky or pearly gray area, a finding usually easy to perceive. Optic atrophy and nystagmus may be present in addition. The course of the disease is progressive and death usually ensues within approximately eighteen months, although occasionally the disease may extend as long as three years.

Defective heredity is believed to be the dominant factor. Consanguinity, by its frequent incidence in the affected families, may be of definite significance. In many of the cases recorded it is notable that the parents were first cousins. It is important to stress, however, that an hereditary influence is not all-pervading in a given family, since some of the siblings develop normally and one of twins may be entirely normal, whereas the other may be an amaurotic idiot.

While this discussion deals primarily with the infantile form of Tay-Sachs' disease, it is of interest to mention, in passing, that several other forms of amaurotic idiocy exist, namely, a late infantile form, a juvenile form, and an adult form. All of these types differ from the most common infantile form in the time of onset, course, racial predilection and retinal changes. The late infantile type[10] is of rare occurrence. The signs of deterioration appear at about three and one-half years and the disease process terminates with death in approximately four years. Non-Jews are affected and the cherry-red spot, so characteristic of the infantile type, is missing. The juvenile type[25] manifests itself usually at about six years and runs its course for about eight years. Non-Jews are affected and, as in the case of the late infantile type, the cherry-red spot is absent. Pigmentary changes (retinitis pigmentosa) and optic atrophy are to be found. The adult form[11] which is extremely rare, has its onset from twenty-one to twenty-six years. In this type also, retinitis pigmentosa replaces the fundus findings of the infantile type.

The pathology of amaurotic family idiocy has been fully described and is characterized chiefly by widespread degenerative and developmental changes in the entire central nervous system. At autopsy, the brain is found to be of leathery consistency; there is convolutional atrophy, and the brain is apt to be reduced in size. The histological findings are typical. The ganglion cells throughout the central nervous system are involved. They are found to be bottle-shaped in appearance, the swelling of the cells being produced by the presence of hematoxylinophilic granules of lipoid character, lecithin-like substances or phosphatides. A variety of associated and secondary changes exist in the other structural components of the central nervous system.

The characteristic onset, the rapid mental and physical deterioration, blindness and the tell-tale ophthalmoscopic findings comprise a clinical picture that is difficult, with one exception, to confuse with other conditions. Another condition, Niemann-Pick's disease (lipoid histiocytosis), however, so closely resembles infantile amaurotic family idiocy in its racial predilection, clinical, chemical, and pathological aspects that some consider both conditions variants of a fundamental disturbance of lipoid metabolism. In Niemann-Pick's disease, the predisposition to occur in Jewish infants, the rapid mental and physical deterioration, blindness, and in a certain number of instances, the cherry-red spot are present. The pathological and chemical changes are very similar and often indistinguishable from those found in the infantile form of Tay-Sachs' disease. The course in Niemann-Pick's disease is more rapid, but the chief distinction lies in the involvement of the visceral organs, with enlargement of the spleen and liver.

## Case Report

The patient, a baby girl, was brought to the clinic for the first time when she was ten months old because of weakness. Her parents were of pure Finnish stock and there were three children. Two were living and one had died at the age of sixteen months of a condition which the parents and family doctor thought closely resembled that of the patient under discussion.

The patient was born at term without abnormal circumstances. Her birth weight was eight pounds and she had progressed normally, according to the parents, up to the age of approximately seven and

one-half months, at which time increasing listlessness was noticed. By the end of the eighth month, weakness had so progressed that the infant lost its ability to hold up its head and to sit erect, although she had learned to sit up at the age of six and one-half months. It also became apparent that she was no longer attentive to her surroundings.

Examination showed an obese, flabby, listless baby, exhibiting little reaction to its environment. Hyperacusis was not marked. The spleen and liver were slightly enlarged, a finding which was confirmed by a roentgenogram of abdomen. The spleen was felt about two finger-breadths below the costal margin and the liver was barely palpable. Generalized hypotonicity was present. No spasticity was made out. Reflexes were unaltered. There was no clinical evidence of rickets. The anterior fontonelle was two finger-breadths wide and the cranial bossæ appeared normal. One erupted tooth was present. Vision, as tested by simple methods, appeared entirely lost. Ophthalmoscopic examination revealed extremely white discs. At the macular region, bilaterally, a grayish white area about one disc diameter in size with a cherry-red spot in its center was present."

*Laboratory findings.*—Blood Kahn and intracutaneous tuberculin tests were negative. Urinalysis was negative. Red count, 4,760,000; hemoglobin 83 per cent; white count, 23,000 with normal distribution of cells in the differential count.

*Splenic puncture findings.*—Because of the finding of an enlarged spleen and its possible connection with Niemann-Pick's disease, a splenic puncture was performed and a small amount of splenic pulp was obtained. This specimen was sent to Dr. Carl V. Weller, head of the Department of Pathology, University of Michigan Medical School, for examination. The material was stained by routine and special methods. No evidence of Niemann-Pick's or Gaucher's disease was found. There was possibly a slight hypertrophy of the reticulo-endothelium, but the cells were not significantly vacuolated. No foam cells were present. The Scharlach R. stain did not reveal the presence of lipids.

*Course.*—The infant was seen on three different occasions at the Clinic, when she was ten, eleven and twelve months respectively. The infant died at the age of seventeen and one-half months and unfortunately an opportunity to perform an autopsy did not present itself.


## Summary

An instance of infantile amaurotic family idiocy in a non-Jewish infant is reported, which increases the number of such cases to sixteen. The patient's parents were of pure Finnish stock. The clinical picture in the majority of cases is typical and it appears very probable that, if each instance of acute mental and physical deterioration in infancy were studied carefully, especially ophthamologically, a greater number of cases would be uncovered.


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# FIVE-YEAR SURVEY OF ANTI-LUETIC THERAPY IN THE YPSILANTI STATE HOSPITAL


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Syphilis of the central nervous system has occurred in 8.6 per cent of the population of the Ypsilanti State Hospital during the past five years. Many of these patients were far deteriorated when received, as they were not first admissions, but transfers from other institutions. It was therefore necessary to give intensive anti-luetic therapy. Many had received treatments prior to coming to the hospital, but treatments were continued in the hope of preventing further deterioration. Following herewith is presented an analysis of treatment and results obtained. Hyperpyrexia was the treatment of choice. The types used were (1) malaria, (2) diathermy, and (3) foreign protein. The majority of the cases were given malaria—the whole group will be discussed under the heading Hyperpyrexia. In presenting a patient for anti-luetic therapy, after complete physical, neurological and mental examinations, the

†See page 348, "Among Our Contributors."

patient is submitted to a series of tests before admitting him to Hyperpyrexia, in an attempt to rule out any possible aneurysm, cardiac damage, renal insufficiency, or other somatic conditions that might contra-indicate a high temperature. The permission of the family is necessary before the treatment is given to the patient. The plan followed was to give at least fifty hours of a temperature of over 103 degrees Fahrenheit, if they are physically able to stand this temperature. Some have had much longer periods of over 103 degrees, one having had 111 hours. Recent discussion of hyperpyrexic treatment of paresis by Mr. Kettering and Dr. Simpson suggests that the standard should be seventy-five therapeutic hours of a temperature of over 105 degrees. That is in the treatment by short wave radio—other clinics have other standards.

We have found that malaria patients have to be carefully watched. We have a special ward where such patients are under constant supervision. There is the possibility of enlarged spleen with subsequent fracture of the spleen. Polayes and Lederer, in 1931, report on rupture of the spleen in induced malaria stating that there are about ten authentic cases of fracture of the spleen reported so far in the literature. This is noted by the author, but in this clinic we are glad to report that there has never been an incident of this, although there have been some enlarged spleens and it has been necessary to abort before the completion of the required number of hours. There is also a tendency to jaundice, and if this is severe, it is also an indication for culminating the treatment. We have found that malaria is the treatment of choice for mental patients. They are much easier to handle while having the high temperature than when having the temperature with diathermy, and, for that reason, we have not used diathermy for hyperpyrexic purposes for the past four years. If the patient is too weak to withstand malaria when first admitted, he is given a course of anti-leutic therapy in an attempt to improve his physical condition. Our plan is also to give intensive anti-leutic therapy following malaria. Following the malaria, another very careful physical, neurological and mental examination is made, plus intensive laboratory work. There is often a severe secondary anemia and often some mild cardiac decompensation, and the patient has to be kept under supervision and bed rest for a period.

As stated above, 8.6 per cent of the population of the hospital, or in numbers, 269 patients, have had Central Nervous System Lues. Of this number 158 General Paretics received malaria treatment plus heavy metals. One hundred eleven received only heavy metals. This was due to age, physical disability, or refusal of the family to give permission.

The following tables give the descriptive data of those receiving malaria plus heavy metals, divided by sexes:

| I. Male | No. | % |
|---|---|---|
| Paroled: | | |
| Recovered | 32 | 26.66 |
| Improved | 8 | 6.66 |
| Deported | 2 | 1.66 |
| Transferred to other hospitals | 3 | 2.5 |
| In Residence: | | |
| Improved | 41 | 34.1 |
| Non-improved | 15 | 12.5. |
| Died | 19 | 15.83 |
| | 120 | |

| II. Female | | |
|---|---|---|
| Paroled: | | |
| Recovered | 3 | 7.92 |
| Improved | 12 | 31.5 |
| Deported | 1 | 2.68 |
| Transferred to other hospitals | 0 | |
| In Residence: | | |
| Improved | 14 | 36.8 |
| Non-improved | 6 | 15.7 |
| Died | 2 | 5.78 |
| | 38 | |

Tables III and IV cover the 111 patients who received only *Heavy Metals,* divided by sexes.

| III. Male | | |
|---|---|---|
| Paroled: | No. | % |
| Recovered | 2 | 2.24 |
| Improved | 8 | 8.9 |
| Non-improved | 3 | 3.3 |
| Deported | 3 | 3.3 |
| Transferred to other hospitals | 2 | 2.24 |
| In Residence: | | |
| Improved | 11 | 12.1 |
| Non-improved | 11 | 12.1 |
| Died | 50 | 56.1 |
| | 89 | |

| IV. Female | | |
|---|---|---|
| Paroled: | | |
| Recovered | 0 | |
| Improved | 5 | 22.72 |
| Non-improved | 1 | 4.5 |
| Deported | 0 | |
| Transferred to other hospitals | 0 | |
| In Residence: | | |
| Improved | 2 | 9.09 |
| Non-improved | 5 | 22.72 |
| Died | 9 | 40.90 |
| | 22 | |

V. Comparison of Above Four Tables

| | % Malaria Plus Heavy Metals | % Only Heavy Metals |
|---|---|---|
| Male recovered | 26.66 | 2.24 |
| Female recovered | 7.92 | 0 |
| Male improved | 6.66 | 8.9 |
| Female improved | 31.5 | 22.72 |
| Male improved, but in residence | 34.1 | 12.1 |
| Female improved, but in residence | 36.8 | 9.09 |
| Male non-improved | 12.5 | 15.7 |
| Female non-improved | 15.7 | 27.2 |
| Male deaths | 15.83 | 56.1 |
| Female deaths | 5.78 | 40.90 |

VI. Average Days, Age and Hours of Fever Therapy of Paretics:

| | |
|---|---|
| Total patients admitted to June, 1936 | 3128 |
| Total paretics to July 1, 1936 | 269 |
| Male | 209 |
| Female | 60 |
| Average hospital days of all paretics | 521 |
| Male | 503 |
| Female | 604 |
| Average age of paretics | 42.7 |
| Youngest juvenile paretic | 17 |
| Youngest acquired paretic | 23 |
| Oldest in group | 75 |
| Number of paretics receiving hyperpyrexia | 158 |
| Average hospital days of those recovering and receiving malaria (1 yr. 2 mos.) | 426 |
| Average hospital days of those too weak for malaria who died | 204 |
| Average hours of fever of all cases | 52.1 |
| Percentage of all paretics recovering | 13.7 |
| Percentage of those receiving malaria recovering | 22.1 |
| Percentage of those receiving malaria improved | 47.4 |
| Percentage of those not receiving malaria improved | 23.4 |

Figures seem to us rather encouraging, in that malaria does return many more patients to the community than those treated only with heavy metals. It also helps to arrest the deterioration and mental dilapidation which we know is the result of paresis. We do not have the bedridden paretic patient, as used to be seen years ago, with the skin lesions, untidiness, bed sores, et cetera. This, of course, lessens the nursing problem in a large state hospital.

We were also very much interested in our paroled paretic patients as to the amount of social rehabilitation they had achieved by treatment. This hospital maintains an Out-Patient Department, which sees all paroled patients under the general title of Clinic Supervision. The patient reports to the clinic physician and to the social worker at regular intervals. A check is made of the patient's mental, physical and neurologic health, and the adjustment in the community, and advice is given as indicated for social rehabilitation, and also medically as to whether the patient should have more treatment. We have followed very closely seventy-two paroled general paretic patients. Thirteen of these did not receive malaria. Herewith are presented two tables as a result of this survey. It should be stated that in this group there might have been placed nine women, who have been returned to the community, and who would be able to be self-supporting if they did not have husbands to support them or private incomes. Following is a result of the survey:

| | |
|---|---|
| Paroled patients not receiving malaria: | |
| No information | 5 |
| Supported by others or private income | 2 |
| $ 20-$ 30 a month | 1 |
| $ 30-$ 40 a month | 2 |
| $120-$130 a month | 2 |
| Paroled patients receiving malaria: | |
| No information | 10 |
| Supported by others or private income | 24 |
| $ 20-$ 30 a month | 3 |
| $ 30-$ 40 a month | 4 |
| $ 50-$ 60 a month | 3 |
| $ 60-$ 70 a month | 2 |
| $ 70-$ 80 a month | 2 |
| $ 80-$ 90 a month | 1 |
| $ 90-$100 a month | 1 |
| $100-$110 a month | 3 |
| $120-$130 a month | 2 |
| $140-$150 a month | 1 |
| $150-$160 a month | 2 |
| $200 a month | 1 |

To summarize the above statistics of five years of intensive anti-luetic therapy in the Ypsilanti State Hospital, a series of treatment of 269 patients, the figures point to more favorable results in treating the patient suffering from Central Nervous System Lues with malaria plus heavy metals than with only heavy metals. The recovery rate is much greater in both men and women. The rehabilitation of those Paretics receiving malaria plus heavy metals is much more marked than in the group with only heavy metals. The table of the patients given malaria plus heavy metals points conclusively to the fact that the rehabilitated patients are able to work in greater numbers, some receiving salaries comparable to salaries of the average wage earner.

# THE RÔLE OF THE STREPTOCOCCUS IN THE ETIOLOGY OF PEMPHIGUS, LUPUS ERYTHEMATOSUS AND THE ERYTHEMA GROUP OF HEMATOGENOUS DERMATOSES

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This paper, begun originally to fill a place on our program for tuberculosis and the tuberculids, has wandered far afield. I felt that I had little to offer a dermatologic group in the realm of tuberculosis. My paper belongs more properly to the field of allergy; dealing with cutaneous allergic syndromes, having a probable focal infection basis. I realize this presentation will be theory with only occasional proofs, yet I hope it will prove novel and stimulating.

The inspiration for this paper arose through two cases that I have seen recently of an unusual type of papular erythema having some characteristics of each of the morphologic groups of lupus erythematosus, erythema figuratum perstans and erythema elevatum diutinum, that cleared promptly after removal of foci of infection, although resistant beforehand to the usual methods of treatment including gold therapy. It seems to me that the evidence, particularly from American sources, points to a varied etiology in this group, in which, however, the streptococcus stands pre-eminent. My discussion will be limited to this group without considering those dermatoses in which the streptococcus is an accepted etiologic agent.

That this group is closely related, especially on morphologic grounds, is universally accepted. A differentiation between mild cases of pemphigus and bullous types of erythema multiforme is impossible in many cases on morphologic grounds. Transition forms exist, and the final diagnosis is determined only by the course and developments of the disease. Dermatitis herpetiformis and pemphigus are even more frequently indistinguishable. In fact the French speak of dermatitis herpetiformis (Duhring's disease) as pemphigus prurigeux. A common expression is that time only will differentiate between these three diseases; a fatal outcome indicating pemphigus and recovery or prolonged chronicity favoring erythema multiforme or Duhring's disease. Lupus erythematosus of the chronic discoid type could hardly be confused with pemphigus, erythema multiforme or Duhring's disease, although acute disseminated lupus erythematosus may be almost indistinguishable morphologically from erythema multiforme. The recognition of the Senear-Usher syndrome, however, is a link quite definitely uniting lupus erythematosus with the pemphigus group. It would be a logical conception that the morphologic inter-relationship of this group could point to a common or at least a closely related etiology. Against this view steadily increasing evidence seemingly points to multiple etiological factors instead of a common cause. In combatting such a trend I shall now review the evidence in favor of the streptococcus as the etiologic agent in each of these diseases.

### Lupus Erythematosus

Lupus erythematosus occurs in four main types; chronic discoid or fixed type; generalized discoid or chronic disseminate type; the subacute disseminated; and the acute disseminated types. The chronic discoid type is the more prevalent and runs a chronic course. The acute disseminated type may develop suddenly without previous manifestations, or be superimposed upon the chronic discoid variety. I agree with Veiel[32] that all types of lupus erythematosus are various forms of the same disease, which differ only in the severity of the phenomena present.

There is no agreement as to the etiology of lupus erythematosus. French, Austrian and Scandanavian observers generally attribute the disease to tuberculosis, while in England the streptococcus is held to play a predominant rôle. American and German observers favor the theory of multiple etiological factors, with tuberculosis only as an occasional factor. Certainly in this country, at least, the incidence of tuberculosis in the chronic discoid type is little if any

†See page 348, "Among Our Contributors."

higher than that for the population as a whole, and our first consideration as an etiologic factor is towards focal infection.

Because of its acute, recurrent and fatal characteristics, available necropsy material, as well as its clinical course, so suggestive of an acute infectious process, this discussion of etiology will be limited to the acute disseminate type of lupus erythematosus. Of the many etiological factors which have been mentioned I may name: pulmonary tuberculosis, tuberculous adenopathy, streptococci, sensitivity to light, toxic effects of drugs, injury to the superficial cutaneous blood vessels, focal infection, disease of the reticulo-endothelial system, and disease of the bone marrow as a partial list of incriminating factors. Undoubtedly many of these factors play a rôle, for instance sensitivity to sunlight is a frequent predisposing factor, but it is my aim to show that the streptococcus plays the dominant rôle.

Mook, Weiss and Bromberg,[18] agree with MacLeod,[14] and Keefer and Felty,[9] that disseminate erythematous lupus is a toxic or a septic cutaneous symptom. Kiel[10] is convinced on the basis of necropsy material from 125 cases that the occurrence of tuberculosis in cases of lupus erythematosus is coincidental and unrelated. The results of a recent questionnaire in Germany on the evidence for and against the tuberculous nature of lupus erythematosus,[28] stated that those that deny the tuberculous nature of lupus erythematosus far outnumber those who still affirm it. It is only fair to state, however, that Wise and Sultzberger in their editorial comments in the Year Book of Dermatology and Syphilis[36] repeatedly ascribe to the theory of multiple etiologic factors in the causation of lupus erythematosus.

The reports and discussions of late years in the American literature of such groups of cases of acute disseminate lupus erythematosus as reported by Madden,[15] (nine cases —three autopsies) Mook, Weiss and Bromberg[18] (thirteen cases—four autopsies) and O'Leary[20] (forty-seven cases) favored a focal infection (streptococcus) over the tuberculous etiology. Streptococci have been cultured from the blood stream in cases of lupus erythematosus as reported by Sibley and Wynn,[25] Low, Logan and Rutherford,[12] Semmario and Pessano,[24] Keefer and Felty,[9] Madden[15] and others. In Madden's cases only one recovered, and that developed during an acute sinusitis and cleared following drainage. Templeton in the discussion of Madden's paper reported two cases of lupus erythematosus in which generalization occurred following extraction of abscessed teeth, although recovery followed the use of a vaccine made from the hemolytic streptococci recovered from the teeth or as Templeton suggested, "in spite of it." The association of acute lupus erythematosus disseminatus with arthritis has been reported at autopsy by Weidman,[33] and with neuritis by Ebert.[7] The danger of interfering with foci of infection in these acute cases has been frequently attested to, but this would seem to further incriminate such foci rather than otherwise. As Stokes[30] so ably states it, "To my mind the victim of acute disseminate lupus erythematosus is first and foremost an allergic person explosively and furiously responsive to his infection and with a broken or inhibited leukocytic defense."

Another interesting group of cases are those presenting the lupus erythematosus like eruption of the Libman-Sacks syndrome which presents all the clinical manifestations of subacute lupus erythematosus disseminatus, plus an unusual type of endocarditis. This syndrome has been very carefully and worthily reviewed recently by Belote and Ratner.[2] They favored classifying it as erythema multiforme presenting a bacterial free phase of a previous sepsis, rather than a variant of subacute lupus erythematosus disseminatus. O'Leary[21] in discussing this paper, stated:

> "I have been unable to differentiate between the Libman-Sacks syndrome and subacute disseminate lupus erythematosus. The agglutination test (Welsh) which we have been doing in cases of subacute disseminate lupus erythematosus suggests that a streptococcus is the etiologic factor. I believe that subacute disseminate lupus erythematosus is of streptococcal origin, that the cutaneous picture it presents is varied, and that the complex which Libman and Sacks have described is but one of the several variants of it."

On such data and opinions I rest the case for the streptococcus in lupus erythematosus.

### Pemphigus

My interest in the etiology of pemphigus dates to my work as an assistant to Eberson, in which he found a coccoid bacillus as a probable etiologic agent.[6] This work was

not confirmed due, I believe, to failure in duplicating the technic until that recently carried out and enlarged upon by Welsh,[35] in which he found a pleomorphic organism which, I believe, to be the same as that described by Eberson. The diplococcus described by Pernet and by Bullock and Dunne, the micrococcus lanceolatus and the pseudo diphtheria bacillus of Hamburger and Rubell, as well as the coccus of Whiphouse[1] may all have been variants of this same organism. Led by the work of Rosenow and by Mellon,[16] we now accept a wide pleomorphism in the streptococcal series. Confirmation, I believe, will follow the accurate duplication of Welsh's work and the streptococcus or its toxins be accepted as the etiologic agent in pemphigus. I am not in position to pass upon the incrimination of an invisible filterable virus as the cause of pemphigus and dermatitis herpetiformis by Urbach and Wolfram.[31] It certainly links these two diseases together to have an identical etiology. They admit that they have not duplicated the work of Welsh and with no further reason than my early work and interest I favor the latter's findings. The rather frequent occurrence of a type of pemphigus in meat handlers and its association with swine erysipelas should be recalled. However, as so ably stated by Wise and Sultzberger[37] there are many facets to the problem which are still to be solved. Why is pemphigus predominant among Hebrews while Duhring's disease affects people regardless of race, creed, or color? Why is genuine pemphigus non-existent in infants and children while Duhring's disease often attacks young people? These questions argue for the lack of relationship between these two diseases but do not refute our claim for a specific streptococcus as etiologic.

### Dermatitis Herpetiformis

The question as to whether Duhring's disease and pemphigus should be classed as distinct and separate maladies is a moot one at the present time. One school championed by Bernhardt,[3] J. Darrier,[5] Wise and Sultzberger[38] and others state that the nosologic position of pemphigus is entirely different from that of dermatitis herpetiformis; that no transition forms can exist between diseases so different in nature and that when symptoms of the two diseases appear in one person it is coincidence. However, in answer to a questionnaire on "Are pemphigus and Duhring's disease sui generis or are there transition forms between them"?[22] Grouven, Kumer, Linser, Nekham and Rille favored the view confirmed by Urbach's animal experiments that Duhring's dermatoses is a variant of chronic pemphigus, and that there are numerous transition forms in the literature. It is only fair to state that others feel that dermatitis herpetiformis is more closely related to chronic urticaria and is subject to the multiple etiologic factors of this disease. Focal infection has never been emphasized as the important etiologic factor in either pemphigus or Duhring's disease. It is discussed in this group largely on a basis of morphologic relationship, although as stated the work of Urbach linking the two etiologically and the incrimination of the streptococcus by Welsh in pemphigus as well as in dermatitis herpetiformis makes it belong logically in this consideration.

### Erythema Nodosum

A voluminous literature has arisen in the past ten years over the etiology of erythema nodosum, with divided opinions between rheumatic, tubercular, multiple factors and a separate distinct infectious disease. I feel that the tubercular etiology has more evidence to support it, especially in children, than is warranted in lupus erythematosus. The purely rheumatic etiology has fewer adherents today than formerly. That many different factors may produce erythema nodosum must be accepted. I feel that Jadassohn[8] expressed the problems in the erythema nodosum group so capably in a discussion before the American Dermatological Society at the time of his last American visit as to be well worthy of quotation here. He stated:

> "I believe for the present that it is advisable to differentiate the secondary symptomatic group from the group with unknown causes. In the first group microbic or toxic substances may be the cause; for example, immune bodies, pyemia, tuberculosis, syphilis, gonorrhea, et cetera, but all of these cases are not really typical clinically. In typical cases we did not find the microbes, but I believe it is caused by an unknown specific organism. The same seems to be true for erythema multiforme which belongs to the group of dermatoses very similar to erythema nodosum."

In answer to a German symposium on, "Which of the proposed etiologies of

erythema nodosum is the most plausible?," Dittrich[29] states that many factors can give rise to the picture of erythema nodosum, with more and more secondary forms coming to light. As to the idiopathic form he thinks it has nothing to do with tuberculosis but is more closely related to skin rheumatoid.

The opinion that erythema nodosum is an independent disease having characteristics of an acute infectious fever is championed by the British (Symes,[27] Lendon,[11] Mitman,[17] et al). This is favored because of numerous evidences of its communicability, incubation and prodromal periods, febrile reaction with leukocytosis, low blood pressure, cutaneous manifestations, convalescence with occasional relapses, and finally lasting immunity; all being features seen in acute infections. E. C. Rosenow[23] reported the cultivation of an organism in seven cases in 1915. The organisms were pleomorphic and could well fit into the group of streptococci as at present accepted. More recently Moon and Strauss[19] (1932) have isolated a pleomorphic organism quite similar to that described by Rosenow. Even more recently (1934) Slot[26] has reported four cases of erythema nodosum in which the use of antistreptococcal (scarlatinal) serum has been followed by excellent and in one case spectacular results.

I believe, therefore, that the multiple factor theory can be accepted, but that those cases due to any one of a large number of accepted causes fall into the secondary symptomatic group. In the typical or primary cases the etiological agent is very probably the streptococcus described by Rosenow and confirmed by Moon and Strauss.

### Erythema Multiforme

Erythema multiforme is very closely related to the pemphigus, dermatitis herpetiformis and erythema nodosum groups. It is also closely related by way of the acute and subacute disseminated types to lupus erythematosus. The remarks of Jadassohn on erythema nodosum apply with equal force to erythema multiforme. The secondary symptomatic group may be due to many varied infectious and toxic agents. In typical primary cases, however, I believe that the streptococcus plays at least the dominant rôle.

McEwen[13] has reported a fatal case in which Streptococcus viridans was cultivated from the tonsils and the blood stream. In the discussion of this paper Guy reported an interesting experience with forty-seven cases in a war time camp. These cases cleared but promptly recurred. Streptococcus viridans was found almost in pure culture deep in the tonsils. On the removal of the tonsils in these cases they were much gratified to find that recurrence of attacks of erythema multiforme ceased. The importance of focal infection in typical recurrent cases of erythema multiforme is well recognized, as well as its relationship to rheumatism, purpura rheumatica and Henoch's purpura.

### Erythema Elevatum Diutinum

Weidman and Besancon[34] have quite fearlessly placed erythema elevatum diutinum in the rheumatoid or more specifically streptococcal group of diseases. They say:

> "The effect of rheumatism together with other focal infectious states extend to the skin in the form of other expressions than the widely known rheumatic nodules; that is, Haverhill's disease, panniculitis, dermatomyositis, erythema nodosum and erythema elevatum diutinum. Erythema elevatum diutinum is an entity, distinctive clinically and histologically; it should attract attention to internal infectious states. When this condition is typical it is so distinctive that rheumatism can be identified in the case simply on the basis of the cutaneous symptoms without reference to the medical history in the case. Streptococcus ignavus was isolated from one of our cases and should be remembered as one of the primary exciting organisms."

### Comment

Whether the streptococcus will ever be accepted as the dominant organism in the etiology of this group of diseases remains to be proven. I feel that such a search for a common etiologic agent, differing only as to the strain or group of strains of the organism concerned, is a step in the right direction rather than the ready acceptance of multiple causes. The paper of Welsh deals with much more than the etiology of pemphigus. Without giving details as to the origin of his cultures, he states that the catophoretic mobility reducing action of serums from patients with pemphigus, dermatitis herpetiformis, lupus erythematosus and erythema multiforme on their respective pooled strains of streptococci was found to be so specific that he has applied this action as a differential diagnostic test. Longer experience has, I believe, even further im-

pressed the Department of Dermatology at the Mayo Clinic as to the invaluable aid of this differential diagnostic test in these diseases.

Another mode of aproach to such a relationship is available through the bacterial complement fixation tests of Burbank and Hadjapoulos[4] who have applied them particularly to the relationship of streptococci to arthritis. Time does not permit a technical discussion of their methods. Such tests may be run with the patient's serum against various stock strains of hemolytic, viridans and non-hemolytic streptococci, or checked further against those organisms recovered by culture from foci of infection in the individual patient. I have used this method in so few cases that my results are not worthy of recording, except to state that it offers a promising field for further investigation.

Finally, it would seem to me that more effort should be made to work out some logical method of therapy based on such an infectious etiology. In Eberson's work with pemphigus we tried to immunize horses and monkeys against this organism and then give such supposedly immune serum to patients. Such procedures failed in our hands. The possibility of the development of specific immune streptococcus serums should be worthy of consideration or the use of serums from patients recovering from these diseases. The use of antistreptococcal serum in the treatment of erythema nodosum already referred to by Slot is, I feel, such a laudable effort. The probability that the cutaneous manifestations are of purely allergic nature secondary to a localized focus of infection rather than an embolic septicemic process, with the possible exception of pemphigus and erythema nodosum, should of course alter our efforts. A study of the value of vaccine therapy as used by Templeton and already referred to seems to be another step in the right direction. That such interest is already manifesting itself among dermatologists is proven by the September, 1936, number of the *Archives of Dermatology and Syphilology,* containing articles entitled "Focal Infection in Dermatology" and "Allergic Bacterial Dermatoses; Their Diagnosis and Treatment with Autogenous Vaccine." The recent developments of vaccine therapy in arthritis using extremely small doses (1-10 organisms) may alter the rather unfavorable status, at present, of such therapy. It is certainly indicated to make at least a thorough investigation for foci of infection in this group of cases since permanent cures have in many instances followed only after their removal; bearing in mind the explosive sensitivity of cases of disseminate lupus erythematosus. I believe that we are on the threshold of important discoveries through the use of antistreptococcal serums and vaccines in these diseases.

## Summary

1. Lupus erythematosus, pemphigus, dermatitis herpetiformis, erythema multiforme and erythema nodosum are very closely related morphologically.

2. Clinical and laboratory evidence is presented to prove that streptococci of probably different but specific strains are at least the dominant etiologic agents for the entire group.

3. A plea for a therapeutic attack by removal of foci of infection, plus an effort to develop specific antistreptococcal serums and vaccines, as a means of producing or increasing immunity in this group of diseases is made.

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## Discussion

DR. UDO J. WILE (Ann Arbor, Mich.): Dr. Shaffer's presentation seems to me to be very timely. It establishes an attempt at least for us to bring some form of coördination in a group of diseases, some of which are morphologically similar, and all of which up to now are entirely obscure as to their exact etiologic factors.

Time does not permit me to enter into a minute discussion of all of the points which have been covered. I should like to confine my remarks particularly to the question of pemphigus and disseminated lupus erythematosus, inasmuch as both of these seem to me to present for the present the least convincing evidence of any determined etiologic agent.

I listened with the greatest degree of interest to the presentation a couple of years ago from the Mayo Clinic of a proved etiologic agent for pemphigus. The work appeared to be conclusive and to have been well controlled. However, I am still at this time unconvinced as to the infectious etiology of the disease. It is difficult for me to accept pemphigus as an infection: first, because of its entire sporadic nature; second, because of its racial distribution; and most important, because of its clinical and morphological characteristics, its microscopic picture, none of which conform to the picture of an infectious disease.

For this reason, therefore, I agree entirely with the view which separates pemphigus very definitely from dermatitis herpetiformis. The latter is so very definitely either a toxic or septic process, not infrequently relating to a focus of infection, and so definitely a variegated pleomorphic picture, that it is only an occasional form which resembles pemphigus.

If we accept the broad concept of multiform erythema to include on the one hand septic erythemas and on the other toxic erythemas, we can with readiness place dermatitis herpetiformis in the group of the multiform erythemas. Pemphigus does not so easily allow itself to be so placed. There is still some evidence to suggest a trophic or neurological basis for this disease, and continued confirmation of Welsh's work will be necessary before pemphigus may be accepted as a specific infection.

I hold similar views with regard to the separation of simple discoid lupus erythematosus from the acute disseminated form. Of the two diseases the simpler, that is the erythematous lupus of the discoid variety, is much the more puzzling since there are no established etiologic factors for this disease. The disseminated form, I think, has, as Dr. Shaffer has pointed out, multiple etiologic factors, all of which in my opinion, are one form of sepsis or another, and in this group, undoubtedly, the streptococci play the major established rôle. However, it must not be overlooked that the tubercle bacillus, and without doubt other organisms, may produce this rapid fulminating disease which from all standpoints clearly points to infection in every case.

It is really unfortunate that the name lupus erythematosus has become associated with this entity. There is immediately an implied connection between the two diseases and this implication is very frequently not borne out by the dissimilarity of the two diseases. We must remember that the skin reacts in a particular way to various insults and a close morphologic similarity often misleads us into the belief of a common etiology. There is, of course, no relation between the pustular syphilid and variola, and yet the two are so nearly alike that differentiation is frequently difficult. This analogy could be carried out indefinitely and in my opinion it applies with equal force to pemphigus and dermatitis herpetiformis on the one hand and to lupus erythematosus and lupus erythematosus disseminatus on the other, diseases with nothing in common except morphologic similarity.

# RHEUMATISM IN CHILDHOOD: ITS RECOGNITION AND TREATMENT*

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Rheumatism affects approximately 1 to 3 per cent of school children in large centers. Such figures, in spite of our clear understanding of the disease, indicate that more is to be learned before effective preventive therapy can be instituted. However, much can be done to modify the course of the disease by intelligent care. It is my purpose in this communication to discuss particularly some of the recent advances in the management of the rheumatic state in childhood, touching upon diagnostic features insofar as they are pertinent to a better understanding of the treatment.

Rheumatism in children manifests itself in different forms. Commonly, growing pains, arthritis and chorea, with or without heart involvement, represent the rheumatic state, but other manifestations, more vague in their interpretation, may complicate the clinical picture. These will be referred to later. Growing pains are often regarded too lightly and are attributed to rapid growth. This attitude is unjustifiable and untenable. Normal growth does not cause pain. Fleeting pains in the legs due to muscle fatigue or poor body mechanics may be confusing but rheumatic pains can be differentiated from these by the fact that they are also likely to be present in the arms, have no particular relationship to exercise and although most commonly present at night can occur at any time during the day. In case of doubt, it is better to err on the safe side and treat the child as rheumatic until proven otherwise. Wise sojournment in bed while the pain is present with adequate doses of acetyl salicylic acid will amply reward the physician for his keen foresight and the patient for the forced stay in bed. By doing this the infection may be stemmed in its infancy. At least 80 per cent and possibly more of all cases of rheumatic infection have some heart involvement arising during a first or subsequent attack. Early cardiac disease can be missed by the usual bedside examination and may be discovered only by special studies such as the electrocardiogram and orthodiagram offer us. Therefore to disregard the fleeting rheumatic pains and wait for more definite clinical evidence of rheumatic heart disease, is to wait too long. To procrastinate in the treatment of what at the time may seem mild and insignificant may in the end lead to irreparable damage and invalidism.

Rheumatic arthritis in children is sometimes overlooked for it is rarely as severe as in adults, the extreme pain, redness, heat, and swelling often being absent. The joint pains may be so mild as not to greatly incapacitate the child who, fearful of being put to bed and given some "distasteful medicine" to take, will not disclose the nature of his illness to his parents. The first indication that anything is wrong is often detected by the presence of a limping gait. The treatment of such a case is rather simple. Absolute bed rest is essential, maintaining it until all the manifestations of rheumatic fever subside, and then for two or three weeks longer, for additional safety. If during the course of this illness, there is evidence pointing to cardiac infection, the bed rest should be prolonged. For many years, clinicians have used acetyl salicylic acid, regarding it as more or less specific for arthritis of rheumatic origin. This practice is still adhered to and by some is even considered to be of diagnostic value. The amount of salicylates used will vary with each case but enough must be given to procure relief from the pain and fever. This often requires about 5 grams a day. If sodium bicarbonate is given along with it in about equal amounts, gastric symptoms may be averted. Kaiser[5] has recently suggested the combination of magnesium oxide and acetyl salicylic acid finding this combination more effective than acetyl salicylic acid alone. The magnesium oxide acts synergistically and guards against salicylate intoxication. After the arthritis has completely

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†See page 348, "Among Our Contributors."

subsided, the salicylates may be discontinued or else the dose reduced and continued for another two to three weeks or even longer. If salicylates are not tolerated by mouth, they can be administered rectally, giving the entire dose at one time as a retention enema.

Sydenham's chorea is considered by many as a manifestation of rheumatic infection. Not every one is in agreement with this view but I will not discuss the many controversial opinions expressed. In a recent survey of 482 cases of chorea, followed over a period of eight years, Jones and Bland[4] observed that the incidence of rheumatic heart disease was only 3 per cent, where chorea alone was present, but 73 per cent where rheumatic fever subsequently developed. For the entire group, the incidence of cardiac involvement was 54 per cent. Such figures intimate at least that chorea by itself is not so frequently the cause of rheumatic heart disease as was formerly believed, except where rheumatic fever is present or subsequently develops. It cannot be denied that there is a close inter-relationship between chorea and other rheumatic infections, even if both are not caused by the same organism. It may be that the individual is a constitutional type which falls a victim to both chorea and rheumatic fever. For the time being, until the question is definitely settled, one should consider chorea as a rheumatic infection and direct treatment towards the prevention of possible cardiac complications.

I should like to stress the importance of differentiating chorea from habit spasm, tic, and other nervous disorders. Sometimes the differential diagnosis is taxing but rests essentially upon the insidious onset of purposeless arrhythmical coarse movements of the body, tremor of the tongue, dysarthria and ataxia of the extremeties. Pseudoparalysis of the hemiplegic type may be present. Once the diagnosis is established, treatment consists essentially of bed rest and sedation, which should be maintained until all the symptoms subside. Under such a regime the child will be well usually within four to six weeks. If bed rest is not insisted upon, it may linger for months, becoming progressively worse. It is not necessary to keep the patient in a dark room, in fact, a sunny, cheery room is advantageous, but absolute quietness is important. To obtain mental and physical relaxation the bromides and barbiturates are usually quite effective. Nirvinol or phenylethyl hydantoin if used at all should be given cautiously. It is quite toxic and a few deaths from its use have been reported. For many years arsenic has been used. Its mode of action on chorea is not exactly known, but it is thought to have some effect on the central nervous system. Calcium, in rather large doses, 3 to 4 grams daily, may be of value in decreasing the neuromuscular irritability. In our clinic we have had singular success with foreign protein therapy, using typhoid paratyphoid vaccine intravenously starting with 50 to 100 M. bacilli undiluted, and increasing the dose daily up to 1000 M. of typhoid bacilli and 750,000 of paratyphoid bacilli. The course consists of ten to fifteen daily injections and is repeated after a week of rest if the symptoms persist. In the majority of our cases it has considerably lessened the hospital stay and in some instances the patients were without symptoms even before the first course was completed. Sutton[9] of New York has been the principal exponent of the Typhoid-Paratyphoid vaccine therapy in chorea and recently has used this treatment in acute rheumatic carditis with good results. We have had no experience with its use in rheumatic heart disease and on the contrary have felt that it would be a rather dangerous procedure in such cases.

As soon as the chorea has subsided the child may be allowed out of bed and to return to normal activities gradually. It is a good plan to keep him out of school for at least a month after he is completely well. Good food, regular hours, and freedom from excitement, worry and overwork both in and out of school will go a long way in preventing recurrences which are rather frequent. The foci of infection such as diseased tonsils, teeth, and infected sinuses should receive the proper care.

In rheumatic heart disease, the treatment depends on the degree of compensation and infection. Because of the frequency with which apical systolic cardiac murmurs are encountered which are not organic in origin it is wise to be not too hasty in diagnosing every heart in which a murmur is heard as rheumatic. Other signs such as cardiac enlargement and electrocardiographic changes point to the murmur as being organic in origin except in acute febrile diseases where

dilatation of the heart will give rise to murmurs which will, however, disappear with the subsidence of the infection and return of the heart to normal size. Congenital heart abnormalities need not be discussed here but their differentiation from rheumatic heart disease is as a rule not troublesome. The difficulty in accurately appraising the cardiac status arises when an apical systolic murmur is present without any other evidence of cardiac disease. A history of preceding rheumatic infection is helpful. When in doubt it is advisable to watch closely such a child over a period of time, for further evidence of rheumatism. Activities need not be limited and the youngster should be encouraged to lead as normal a life as possible. Sometimes when dealing with neurotic parents and a neuropathic child, it is advantageous not to disclose the presence of any cardiac abnormality until it is definitely proven to be organic. Children are highly susceptible to suggestion which frequently undermines both their physical and mental health. Moreover a diagnosis of heart disease even if disproven later stigmatizes the child for many years, even as would an erroneous diagnosis of tuberculosis or syphilis.

Our next concern is for the boy or girl who has active rheumatic infection of the heart. For decompensation semi-Fowler's position in bed with a suitable back rest is very comforting, relieving much of the dyspnoea. Cyanosis may be combated by oxygen, which is also beneficial to the heart muscle. Digitalis is definitely indicated if cardiac insufficiency is present. It has been claimed that this drug is harmful in acute rheumatic carditis, but there is no pharmacological basis for such an assumption. If electrocardiograms are taken before and during digitalis therapy, any abnormalities in cardiac rhythm arising from its use may be detected early. For instance with a prolonged P-R, interval digitalis would be used with caution keeping in mind the possibility of heart block. Inverted T waves arising during the course of treatment would indicate that about two-thirds of the maximum dose has already been given and would serve as a guide where other means fail to give warning of impending digitalis intoxication.

The Eggleston cat unit method for digitalization may be employed or the dosage may be gauged by the physiological results using one grain of the leaf every 6 to 8 hours until digitalization is obtained and then a maintenance dose as long as necessary. Children tolerate digitalis much better than do adults and also require more proportionately. Some are refractory to this drug and nothing is gained by being persistent in its use. Next to digitalis in importance is sedation. The barbiturate group of drugs or codeine may suffice but where these do not give adequate relaxation, morphine may be given. Indeed, its use should not be spared for it creates such mental and physical relaxation as cannot be attained by other drugs. Addiction is not very likely to occur in children, in the dosage administered. The edema is combated by promoting diuresis, purgation, and dehydration. The fluid and salt intake is limited and hypertonic solution of glucose may be given intravenously. Digitalis itself often causes marked diuresis by improving the circulation. The ascites, pleural and pericardial effusions will usually clear up spontaneously but occasionally the fluid has to be removed mechanically where it causes distressing symptoms. Acetyl salicylic acid is of value where joint pain or fever is present. It is very doubtful if it has any healing effect upon the heart. The diet should be light and nutritious being relatively high in carbohydrate and protein and rich in vitamins, particularly vitamin C. In the light of recent work[8] on animals, vitamin C deficiency may play an important role in the development of rheumatic lesions. In guinea pigs given an adequate diet, infection does not cause any marked changes in the heart valves whereas in those deprived of vitamin C, infection results in degenerative and proliferative changes in the valves of the heart very similar to those observed in rheumatic heart disease. Such results suggest that vitamin C bears a significant causal relationship to rheumatism, although no deficiency in the cevitamic acid content has been found in the blood, urine and tonsils of rheumatic children as compared to the normal.[6] Anemia is invariably present in the majority of cases, particularly those of long standing, and should be corrected by adequate amounts of reduced iron or other iron preparations. Addition of liver to the diet will stimulate erythropoiesis. Frequent small blood transfusions, aside from correcting

the anemia, may also supply specific antibodies increasing the resistance to the rheumatic infection.

On the basis that glucose may improve the heart's nutrition we have been giving 15 to 20 per cent solution of dextrose intravenously daily or every other day. The benefit derived from such a procedure is difficult to evaluate but at least it does no harm. It does seem to relieve the acute abdominal pain and vomiting so frequently associated with acute pericarditis.

Vaccines and sera have been used to overcome the infection but as yet the results do not warrant their general acceptance. Although the weight of opinion is in favor of a streptococcus sensitization of tissue as the cause of rheumatic fever attempts at desensitizing or producing immunity by streptococcus vaccines have been quite disappointing. In fact, as Coburn[1] and his associates have so clearly shown, this may only increase the susceptibility of the tissues to further rheumatic infection even though the antistreptolysin titer in the blood is increased.

After the infection has been successfully combated, thought may be given to allowing the patient out of bed. The decision will be based on the degree of cardiac embarrassment, pulse rate, temperature, blood pressure, anemia, leukocytosis and sedimentation rate. Dyspnoea on slight exertion points to myocardial insufficiency and warrants further bed rest. The temperature should not be higher than 99 degrees F. orally with the maximum variation less than 1.5 degrees during the day, and the pulse regular and not over 100 per minute. In easily excitable children, the pulse rate during the day is often higher than normal but if it drops to a normal rate during sleep, it is of no significance. It is desirable that the blood pressure be normal and the pulse pressure not over 50 mm/Hg. Progressive anemia, leukocytosis and an increased sedimentation rate of the erythrocytes (in the absence of other contributing causes) also suggest that the disease is not completely checked. In addition epistaxis, hematuria, erythema nodosum or multiforme, purpura, and rheumatic nodules indicate activity. Residual subclinical infection can easily be overlooked unless all possible evidence is closely scrutinized.

To be doubly sure of preventing exacerbations bed rest should be continued for a period of at least six to eight weeks even after all clinical and laboratory examinations are negative. In our clinic we have placed considerable reliance on the sedimentation rate feeling that is a very sensitive indicator of the presence or absence of infection. In appraising it care must be taken to make corrections for the anemia or else the result is unreliable. In the absence of any other obvious cause for a rapid sedimentation rate, we assume that rheumatic infection is still present, and do not permit the child out of bed till it has dropped to normal. Where cardiac insufficiency is due solely to mechanical factors the sedimentation rate may be normal. In such a case the course to be followed is primarily governed by the patient's general condition. If there is danger of psychoneurosis developing, it will be necessary to shorten the period of confinement to bed. Mental invalidism incapacitates the child even more than chronic rheumatism and should be prevented even at the cost of further damaging the heart.

During convalescence the cardiac balance is regained and compensation is established. Graduated exercises always within cardiac tolerance, as measured by the degree of dyspnoea, are prescribed. An older child can be taken into the physician's confidence and made to understand why he should be careful not to overstep the amount of work he is capable of doing with safety. He can be made to appreciate that regaining his health depends entirely upon himself, and that moderate shortness of breath is a signal for rest, discontinuing all activities. Such intelligent coöperation will yield far better results than having someone supervise his play and dictate as to what he can or cannot do. Of course a younger child will require rather close guidance until he can learn a sense of responsibility. One must be on the watch at all times for signs of reactivity. The state of nutrition is an excellent guide of the child's progress, a failure to gain weight often being evidence of re-infection. In the presence of any supervening infection the heart must be watched closely, and bed rest enforced for a longer period, than in a non-rheumatic child.

The matter of removing questionable foci of infection, particularly tonsils, is probably overemphasized. If the tonsils are diseased they should be removed, but many are be-

ing taken out indiscriminately. Such a practice has not decreased the incidence of cardiac re-infection since the frequency of remissions in tonsillectomized cases is just as great as in the non-tonsillectomized. Nevertheless the clinical improvement that follows the removal of diseased tonsils is so marked that it seems to be justified in every case. If the heart is yet unaffected it does seem to lessen the incidence of cardiac involvement. The optimum time for tonsillectomy is during convalescence, after an afebrile period of at least two weeks with a normal pulse rate. It is advisable to give salicylates preceding and for about two weeks following tonsillectomy. Too early surgical intervention may precipitate an acute flare up of the rheumatic infection and instances are on record where death resulted. This is not so remarkable in view of the bacteremia which not infrequently follows removal of tonsils and teeth. This does not seem to occur after abdominal surgery so that appendectomies and such like measures may be carried out with impunity even though the rheumatic infection is active. It is of course understood that any surgical procedure unless urgent should preferably be postponed till convalescence is established. There are times when the rheumatic infection is resistant to any form of conservative treatment and it becomes necessary to remove the foci of infection during the active phase of the disease.

The physician's responsibility to the child does not end with the completion of convalescence. Dangerous years still are ahead and unless he is carefully guided may succumb at an early age or else become an invalid for the remaining years of his life. A certain number of these children will die early no matter what is done for them. According to Coombs[3] 5.1 per cent die the first year after the initial onset; 11.2 per cent within five years, and 21.4 per cent within ten years. Approximately 50 per cent will have died by the time they reach forty years; 30 to 35 per cent become completely well, showing normal hearts which defy detection of any previous injury. The rest become invalids. Morse[7] in reviewing 100 cases which he had followed from ten to thirty years found that 37 per cent were cured, having normal hearts, and that 36 per cent had died. Some of those whom he had previously considered as advanced cases to his surprise lost all signs of cardiac disease and were now outstanding athletes. The prognosis of rheumatic heart disease in children is therefore relatively good and only becomes poorer with each recurrent attack. The hope lies in saving the lives of the 35 per cent who if neglected would not be so fortunate, and in making the lives of those who are invalids more happy and fruitful. If the rheumatic child is to be given the fullest chance for recovery he must be guarded from infection, fatigue, exposure to cold, worry, anxiety and overwork. Bad housing, overcrowding, noisy environment, insufficient food, and lack of outdoor play are deleterious factors which should be controlled. A change of climate if financial conditions permit, is highly desirable, choosing the warm Southern States or else such zones as Puerto Rico, Cuba and Bermuda. Patients with rheumatism have been known to be entirely well while in Puerto Rico only to suffer a relapse on returning to the United States. For those showing dyspnoea and considerable cardiac damage, it is best not to choose an altitude higher than 3,000 feet above sea level. Remissions are notorious for their insidious onset. Anemia, loss of appetite, and weight, tiredness, low grade fever, dyspnoea on slight exertion, and vague joint pains are ominous signs. Whenever any of these are encountered, a careful investigation should be instituted. A rapid sedimentation rate of the blood cells may precede by days an impending exacerbation of the rheumatic infection and where the other signs are vague or the information obtained conflicting it is of decided value.

Cardiac camps and convalescent homes serve an invaluable function in guiding under expert supervision the lives of many children who would otherwise receive inadequate care. Many of us realize that rheumatism must be challenged in very much the same manner as tuberculosis and yet the facilities for taking care of the former are not as adequate. There should be sanatoriums for caring for rheumatic children just as there are sanatoriums for the tuberculous children. Surely the results that may be looked for in salvaging many lives repay the extra expense and efforts.

In concluding I would like to stress that rheumatism is essentially a disease of childhood. Its diagnosis in the early stages is

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# Michigan State Medical Society
# Roster 1937

## ALLEGAN COUNTY

Beckett, M. B.....Allegan
Brunson, E. T.....Allegan
Damstra, H. J.....Wayland
Dickinson, C. A.....Wayland
Flinn, C. C.....Allegan
Hamelink, M. H.....Hamilton
House, W. B.....Saugatuck
Hudnutt, Orrin Dean.....Plainwell
Johnson, E. B.....Allegan
Johnson, H. H.....Martin
MacNeill, R. A.....Allegan
Mahan, James E.....Allegan
Medill, W. C.....Plainwell
Osmun, E. D.....Allegan
Quine, R. C.....Fennville
Ramseyer, Gladwin E.....Plainwell
Rigterink, George H.....Hamilton
Shepard, Lyle .....Otsego
Stuck, O. H.....Otsego
Vaughan, W. R.....Plainwell
Van Der Kolk, Bert.....Hopkins
Walker, Robert J.....Saugatuck

## ALPENA-ALCONA-PRESQUE ISLE COUNTIES

Burkholder, H. J.....Alpena
Carpenter, Clarence.....Onaway
Foley, E. L.....Alpena
Kessler, Harold.....Alpena
Lister, George F.....Hillman
MacKinnon, A. C.....Atlanta
McKelvey, E. W.....Oscoda
Miller, A. R.....Harrisville
Moffat, Gordon B.....Rogers City
Monroe, Neil.....Rogers City
Nesbitt, Wm. E.....Alpena
Newton, Wm. B.....Alpena
O'Donnell, F. J.....Alpena
Parmenter, E. S.....Alpena
Purdy, John W.....Long Rapids
Rutledge, S. H.....Rogers City
Secrist, Leo F.....Alpena
White, J. A.....Alpena

## BARRY COUNTY

Cobb, Thomas H.....Woodland
Finnie, R. G.....Hastings
Fisher, Gordon F.....Hastings
Gwinn, A. B.....Hastings
Harkness, Robert B.....Hastings
Heney, M. Alice.....Hastings
Keller, Guy C.....Hastings
Lathrop, Clarence P.....Hastings
Lofdahl, Stewart.....Nashville
Lund, Chester A. E.....Middleville
McIntyre, C. S.....Hastings
McIntyre, K. S.....Hastings
Morris, Edgar T.....Nashville
Swift, B. C.....Middleville
Wedel, H. S.....Freeport

## BAY-ARENAC-IOSCO-GLADWIN COUNTIES

Allen, A. D.....Bay City
Asline, J. N.....Bay City
Austin, Justis.....Tawas City
Baker, Chas. H.....Bay City
Ballard, Sylvester L.....Bay City
Ballard, W. R.....Bay City
Berman, Harry.....Omer
Boulton, A. O. (Emeritus)....Gladwin
Bristow, J. H.....Bay City
Brown, G. M.....Bay City
Chapman, E. J.....Bay City
Criswell, R. H.....Bay City
Dickinson, John W.....Oscoda
Drummond, Fred.....Kawkawlin
Dumond, V. H.....Bay City
Ely, Nina .....Bay City
Foster, L. Fernald.....Bay City
Freel, John A.....Bay City
Gamble, Jr., W. G.....Bay City
Groomes, Charles.....Bay City
Grosjean, J. C.....Bay City
Gunn, Robert.....Standish
Gustin, J. W.....Bay City
Hagleshaw, G. L.....Bay City
Hand, Eugene.....Saginaw
Hasty, Earl.....Whittemore
Hauxhurst, J. W.....Bay City
Healy, Gaillard H.....Bay City
Hess, C. L.....Bay City
Horowitz, S. Franklin.....Bay City
Huckins, E. S.....Bay City
Hughes, E. C.....Bay City
Husted, F. Pitkin.....Bay City
Jacoby, A. H.....Bay City
Jens, Otto.....Essexville
Jones, Jerry M.....Bay City
Kerr, Wm. .....Bay City
Kessler, Mana .....Bay City
Kessler, S.....Bay City
Kowals, F. V.....Bay City
LaPorte, L. A.....Gladwin
Leininger, J. W. (Emeritus)..Gladwin
McCarroll, James C.....Bay City
McDowell, Guy Marshall.....Howell
McEwan, J. H.....Bay City
Medvesky, M. J.....Bay City
Miller, Maurice C.....Auburn
Mitton, O. W.....East Tawas
Moore, George W.....Bay City
Moore, Neal R.....Bay City
Mosier, D. J.....Bay City
Perkins, Roy C.....Bay City
Petty, J. R.....Au Gres
Reutter, C. W.....Bay City
Scrafford, Royston Earl.....Bay City
Sherman, R. N.....Bay City
Slattery, M. R.....Bay City
Speckhard, A. O.....Bay City
Stinson, W. S.....Bay City
Swantek, Charles M.....Bay City
Sweet, I. C.....Sterling
Tarter, Clyde.....Bay City
Thiehoff, E. V.....Gladwin
Tupper, Virgil L.....Bay City
Urmston, Paul R.....Bay City
Warren, E. C.....Bay City
Weed, John .....Tawas City
Wilcox, J. W.....Bay City
Wilson, Thomas G.....Bay City
Wittwer, E. A.....Bay City
Ziliak, A. L.....Bay City

## BERRIEN COUNTY

Allen, J. U.....Benton Harbor
Allen, Robert C.....St. Joseph
Anderson, A. J. .....New Buffalo
Bliesmer, A. F.....St. Joseph
Brown, F. W.....Watervliet
Burrell, H. J.....Benton Harbor
Cawthorne, H. J.....Benton Harbor
Colef, Irving.....Benton Harbor
Conybeare, R. C.....Benton Harbor
Dunnington, R. N.....Benton Harbor
Ellet, W. C.....Benton Harbor
Emery, Clayton.....St. Joseph
Fredrickson, H. C.....Buchanan
Gillette, Clarence H.....Niles
Hart, Russel T.....Niles
Harrison, L. L.....Niles
Helkie, William L.....Three Oaks
Henderson, Fred.....Niles
Henderson, Robert..... Niles
Hershey, Noel J.....Niles
Higbee, Frank O.....Three Oaks
Herring, Nathaniel A.....Niles
Ingleright, Leon R.....Niles
Keppen, Ford.....Three Oaks
Kok, Harry.....Benton Harbor
Kotler, M. J.....Coloma
Littlejohn, Wm.....Bridgman
McDermott, J. J.....St. Joseph
Merritt, Charles W.....St. Joseph
Miller, E. A.....Berrien Springs
Mitchell, Carl A.....Benton Harbor
Reagan, Robert.....Benton Harbor
Richmond, D. M.....St. Joseph
Simpson, Loleta E.....Berrien Springs
Smith, W. A.....Berrien Springs
Sonnemann, C. O.....St. Joseph
Strayer, J. C.....Buchanan
Thorup, D. W.....Benton Harbor
Westervelt, H. O.....Benton Harbor

## BRANCH COUNTY

Aldrich, Napier .....Coldwater
Beck, Perry C.....Bronson
Bien, W. J.....Coldwater
Brunson, A. E.....Coldwater
Chipman, E. M.....Quincy
Culver, Bert W.....Coldwater
Danley, W. E.....Union City
Far, S. E.....Quincy
Fraser, R. J.....Bronson
Gist, L. I.....Coldwater
Holbrook, A. G.....Coldwater
Leeder, F. S.....Coldwater
McLain, R. W.....Jackson
Meier, H. J.....Coldwater
Olmsted, Kenneth L.....Coldwater
Phillips, F. L. .....Bronson
Schneider, H. A.....Coldwater
Schultz, Samuel.....Coldwater
Scovill, H. A.....Union City
Thomas, J. A.....Coldwater
Wade, R. L.....Coldwater
Weidner, H. R.....Coldwater

## CALHOUN COUNTY

Abbott, Nelson .....Marshall
Allen, Herbert R.....Battle Creek
Amos, Norman H.....Battle Creek
Baribeau, R. H.....Battle Creek
Barnhart, Samuel E.....Battle Creek
Becker, H. F.....Battle Creek
Beuker, Herman .....Marshall
Bonifer, Philip.....Battle Creek
Brainard, C. W.....Battle Creek
Byland, N. O.....Battle Creek
Campbell, Alice .....Albion
Campbell, R. J.....Battle Creek
Capron, Manley J.....Battle Creek
Church, Starr K.....Marshall
Chynoweth, W. R.....Battle Creek
Cooper, J. E.....Battle Creek
Curry, Robert K.....Homer
Derickson, E. C.....Burlington
Dickson, A. R.....Battle Creek
Dodge, Jr., Warren M....Battle Creek
Dugan, Wm. M.....Battle Creek
Eggleston, Elmer L.....Battle Creek
Elliott, James.....Battle Creek
Fahndrich, C. G.....Battle Creek
Finch, D. L.....Augusta
Fopeano, John V.....Battle Creek
Fraser, R. H.....Battle Creek
Gething, Joseph V.....Battle Creek
Giddings, A. M.....Battle Creek
Gilfillan, Margery J.....Battle Creek
Godfrey, Willoughby L. (Honorary) Battle Creek
Gordon, J. K. M.....Battle Creek
Gorsline, Clarence S.....Battle Creek
Hafford, Alpheus T.....Albion
Hafford, George C.....Albion
Hansen, E. L.....Battle Creek
Haughey, Wilfrid .....Battle Creek
Haughey, Wm. H. (Honorary) Battle Creek
Heald, C. W.....Battle Creek
Henderson, Louis M.....Albion
Henderson, Phillip .....Albion
Herzer, Henry A.....Albion
Hills, C. R.....Battle Creek
Holes, Jesse J.....Battle Creek
Holtom, B. G.....Battle Creek
Howard, W. L.....Battle Creek
Hoyt, Aura A.....Battle Creek
Humphrey, Archie E.....Marshall
Humphrey, Arthur A.....Battle Creek
Jesperson, Lydia.....Battle Creek
Johnson, O. J.....Marshall
Jones, T. K.....Marshall
Keagle, Lelald R.....Battle Creek
Keeler, K. B.....Albion
Kellogg, John H.....Battle Creek
Kingsley, Paul C.....Battle Creek
Kinde, M. R. .....Marshall
Kolvoord, Theodore.....Battle Creek
LaFrance, Francis.....Battle Creek
Landon, Charles C.....Battle Creek
Lanman, Everett L.....Battle Creek
LeDuc, Don M.....Detroit
Lewis, W. B.....Battle Creek
Lowe, H. M.....Battle Creek
Lowe, Kenneth.....Battle Creek
Lowe, Stanley T.....Battle Creek
MacGregor, Archibald E...Battle Creek
Martin, Walter F.....Battle Creek
Melges, F. J.....Battle Creek
Mercer, C. M.....Battle Creek
Morrison, Donald B.....Tekonsha
Mortensen, Martin A.....Battle Creek
Moshier, Bertha.....Battle Creek
Mustard, Russell.....Battle Creek
Nelson, Albert W.....Battle Creek
Norman, Estelle G.....Florida
Olsen, A. B.....Battle Creek
Overholt, B. M.....Battle Creek
Patterson, A.....Battle Creek
Pritchard, J. Stuart.....Battle Creek
Pudliner, H. G.....Bellevue
Radabaugh, Clara V.....Battle Creek
Riley, William H.....Battle Creek
Robbert, John.....Climax
Rosenfeld, J. E.....Battle Creek
Roth, Paul.....Battle Creek
Royer, C. W.....Battle Creek
Royer, W. A.....Battle Creek
Selmon, Bertha L.....Battle Creek
Sayre, Phillip P.....South Haven
Sharp, A. D.....Albion
Shipp, L. P.....Battle Creek
Simpson, R. S.....Battle Creek
Slagle, George W.....Battle Creek
Sleight, Raymond D.....Battle Creek
Stadle, Wendell H.....Battle Creek
Steinbach, R. H.....Battle Creek
Stewart, Charles E.....Battle Creek
Stiefel, Richard A.....Battle Creek
Tannenholz, Harold S....Battle Creek
Taylor, Clifford B.....Albion
Upson, W. O.....Battle Creek
Van Camp, Elijah.....Battle Creek
Vander Voort, W. V....Battle Creek
Verity, Lloyd E.....Battle Creek
Vollmer, Maud J.....Moline, Ill.
Walters, F. R.....Battle Creek
Wencke, Carl G.....Battle Creek
Whyte, Bruce.....Battle Creek
Winslow, Rollin C.....Battle Creek
Zinn, Karl.....Battle Creek

## CASS COUNTY

Adams, U. M.....Marcellus
Bryant, S. E.....Dowagiac
Cunningham, E. M.....Cassopolis
Harmon, C. M.....Cassopolis
Hickman, John .....Dowagiac
Jones, John H.....Dowagiac
Kelsey, James H.....Cassopolis
Loupee, George.....Dowagiac
Loupee, S. L.....Dowagiac
Lyman, W. R.....Dowagiac
McCutcheon, Wm. C.....Cassopolis
Myers, Charles M.....Dowagiac
Newsome, Otis.....Cassopolis
Pierce, Kenneth C.....Dowagiac
Zwergel, E. H.....Cassopolis

## CHIPPEWA-MACKINAC COUNTIES

Bandy, Festus Cecil..Sault Ste. Marie
Blain, James G.....Sault Ste. Marie
Conrad, George A....Sault Ste. Marie
Cornell, Eliphalet A. (Honorary) Sault Ste. Marie
Darby, J. F.....St. Ignace
Edmison, W. C.....St. Ignace
Ennis, C. J. (Honorary) Sault Ste. Marie
Fox, T. Greeley.....Pickford
Gilfillan, E. O.....Sault Ste. Marie
Husband, F. H.....Sault Ste. Marie
Littlejohn, David.....Sault Ste. Marie
Mertaugh, W. F.....Sault Ste. Marie
Moloney, F. J.....Sault Ste. Marie
Reese, J. A.....DeTour
Rhind, E. S.....Rudyard
Tamblyn, F. W.....Sault Ste. Marie
Vegors, Stanley H....Sault Ste. Marie
Willison, C.....Sault Ste. Marie
Yale, I. V.....Sault Ste. Marie

## CLINTON COUNTY

Foo, Charles T.....St. Johns
Frace, Guy H.....St. Johns
Hart, A. O.....St. Johns
Hart, Dean W.....St. Johns
Henthorn, A. C.....St. Johns
Ho, Thomas Y.....St. Johns
Luton, F. E.....St. Johns
MacPherson, D. H. .....Fowler
McWilliams, W. B.....Maple Rapids
Richards, F. D.....DeWitt
Russell, Sherwood R.....St. Johns

## DELTA COUNTY

Bartley, Geo. C.....Escanaba
Benson, G. W.....Escanaba
Boyce, D. H.....Escanaba
Carlton, A. J.....Escanaba
Chenoweth, Nancy R.....Escanaba
Defnet, Harry John.....Escanaba
Farrier, R. C.....Escanaba
Frenn, N. J..... Bark River
Groos, Harold Quinten .....Escanaba
Groos, Louis P.....Escanaba
Hult, Otto S.....Gladstone
Kitchen, A. S.....Escanaba
Lemire, Wm. A.....Escanaba
Long, Harry W.....Escanaba
Miller, Albert H.....Gladstone
Mitchell, James D.....Gladstone
Moll, G. W.....Escanaba
Walch, J. J.....Escanaba
Witters, Josef E.....Nahma

## DICKINSON-IRON COUNTIES

Alexander, W. H.....Iron Mountain
Anderson, E. B.....Iron Mountain
Boyce, Geo. H.....Iron Mountain
Browning, James L....Iron Mountain
Crowell, Joseph A.....Iron Mountain
De Salvo, F.....Iron Mountain
Fielding, William.....Norway
Haight, Arthur L.....Crystal Falls
Haight, H. H.....Crystal Falls
Hamlin, Lloyd E.....Norway
Hayes, R. E.....Sagola
Huron, W. H.....Iron Mountain
Irvine, L. E.....Iron River
Kofmehl, Wm. J.....Stambaugh
Larson, H. J.....Crystal Falls
Levine, D. A.....Iron River
Libbey, Edward M.....Iron River
Menzies, Clifford .....Iron Mountain
Smith, Donald R.....Iron Mountain
Walker, Claude W.....Iron Mountain
White, Robert E.....Stambaugh

## EATON COUNTY

Anderson, K. A.....Charlotte
Bradley, James B.....Eaton Rapids
Brown, B. Philip.....Charlotte
Burdick, Austin F.....Lansing
Burleson, A. H. (Honorary)....Olivet
Davis, J. W.....Charlotte
Engle, Paul .....Olivet
Hargrave, Don V.....Eaton Rapids
Huber, Chas. D.....Charlotte
Imthun, Edgar F.....Grand Ledge
Lawther, John.....Charlotte
Lown, C. A.....Grand Ledge
McLaughlin, C. L. D.....Vermontville
Moyer, H. A.....Charlotte
Myers, Albert W.....Potterville
Paine, Sr., E. M.....Grand Ledge
Paine, Jr., E. Madison..Grand Ledge
Quick, Phil H.....Olivet
Rickerd, Vinton J.....Charlotte
Sackett, C. S.....Charlotte
Sassman, F. W.....Charlotte
Sevener, C. J.....Charlotte
Sevener, Lester G.....Charlotte
Sheets, A. G.....Eaton Rapids
Stanka, Andrew Geo.....Grand Ledge
Stimson, C. A.....Eaton Rapids
Van Ark, Bert.....Eaton Rapids
Wilensky, Thomas.....Eaton Rapids

## GENESEE COUNTY

Andrews, N. A. C.....Flushing
Anthony, George E.....Flint
Ard, Horace.....Montrose
Backus, G. R.....Flint
Bahlman, Gordon H.....Flint
Baird, James.....Flint
Baske, Franklin W.....Flint
Bateman, L. G.....Flint
Benson, J. C.....Flint
Biggar, H. R.....Flint
Blakeley, A. C.....Flint
Bogart, Leon M.....Flint
Boles, Wm. P.....Flint
Bonathan, A. T.....Flint
Bradley, Robert.....Flint
Brain, Gordon R.....Flint
Brasie, D. R.....Flint
Briggs, Guy D.....Flint
Burnell, B. E.....Flint
Burnell, Max.....Flint
Chambers, Myrton S.....Flint
Charters, John H.....Flushing
Childs, Lloyd H.....Flint
Clark, Clifford P.....Flint
Colwell, C. W.....Flint
Connell, J. T.....Flint
Conover, G. V.....Flint
Conover, T. S.....Flint
Cook, Henry.....Flint
Covert, F. L.....Gaines
Credille, B. A.....Flint
Curry, George.....Flint
Curtin, J H.....Flint
Zingro, N. Del.....Davison
Dimond, E. G.....Flint
Dodds, F. E.....Flint
Drewyer, Glen.....Flint
Edgerton, A. C.....Clio
Evers, J. W.....Flint
Finkelstein, T.....Flint
Flynn, S. T.....Flint
Fuller, H. T.....Mt. Morris
Gelenger, S. M.....Flint
Gibson, T. E.....Flint
Gleason, N. Arthur.....Flint
Goering, George R.....Flint
Golden, H. Maxwell.....Flint
Goodfellow, B. J.....Flint
Gorne, S. S.....Flint
Graham, H.....Mt. Morris
Grover, H. F.....Flint
Guile, Earle.....Flint
Guild, G. S.....Flint
Gundry, G. L.....Grand Blanc
Hague, R. F.....Flint
Halligan, Raymond S.....Flint
Handy, John W.....Flint
Harper, A. W.....Flint
Harper, Homer.....Flint
Hawkins, James E.....Flint
Hiscock, H. H.....Flint
Houston, James.....Swartz Creek
Hubbard, Wm. B.....Flint
Johnson, F.....Flint
Jones, Lafon.....Flint
Kirk, A. Dale.....Flint
Kretchmar, A. H.....Flint
Leach, J. L.....Flint
Logan, G. W.....Flushing
MacDuff, R. B.....Flint
MacGregor, D. M.....Flint
MacGrogor, R. W.....Flint
Macksood, Joseph.....Flint
Malfroid, B. W.....Flint
Marsh, H.....Flint
Marshall, Wm. H.....Flint
Mason, Elta.....Flint
Matthewson, Guy C.....Flint
McArthur, A.....Flint
McGarry, R. A.....Flint
McGregor, James C.....Flint
McKenna, O. W.....Flint
Miner, F. B.....Flint
Moore, John.....Flint
Morrish, Ray S.....Flint
Morrissey, V. S.....Flint
Mosier, Edward C.....Otisville
Odle, Ira.....Flint
Olson, James.....Flint
O'Neil, C. H.....Flint
Orr, Walter J.....Flint
Paull, A. T.....Flint
Pett, Robert.....Flint
Pfeiffer, A. C.....Mt. Morris
Phillips, R. L.....Flint
Pratz, O. C.....Flint
Probert, C. C.....Flint
Randall, H. E.....Flint
Reeder, Frank E.....Flint
Reid, Wells C..... Goodrich
Richeson, V.....Flint
Roberts, Floyd A.....Flint
Rosenblum, Herman.....Flint
Rowley, James A.....Flint
Rundles, Walter Z.....Flint
Scavarda, Charles J.....Flint
Scott, R. D.....Flint
Shantz, L. O.....Flint
Sleeman, Blythe.....Linden
Smith, D. C.....Flint
Sniderman, Benjamin.....Flint
Snyder, Charles E.....Swartz Creek
Sorkin, S. S.....Flint
Spencer, J. A.....Flint
Steinman, F. H.....Flint
Stephenson, Robert A.....Flint
Stevenson, W. W.....Flint
Stewart, Wilbur F.....Flint
Stroup, C. K.....Flint
Sutherland, James K.....Flint
Sutton, George .....Flint
Sutton, M. R.....Flint
Thompson, Alvin.....Flint
Treat, D. L.....Flint
Trumble, G. W.....Flint
Walden, C. E.....Flint
Wall, W. J.....Davison
Ward, Nell.....Flint
Ware, Frank A.....Flint
Wark, D. R.....Flint
Wheelock, A. S.....Flint
White, C. H.....Fenton
White, Herbert.....Flint
Williams, W. S.....Flint
Willoughby, G. L.....Flint
Willoughby, L. L.....Flint
Wills, T. N.....Flint
Winchester, Walter H.....Flint
Woughter, D. H.....Flint
Wright, D. R.....Flint
Wright, G. R.....Montrose
Yeomans, T. G.....Flint

## GOGEBIC COUNTY

Anderson, Charles E.....Bessemer
Conley, W. C.....Ironwood
Crosby, Theodore S.....Ironwood
Eisele, D. C.....Ironwood
Gertz, M. A.....Ironwood
Gorrilla, A. C.....Ironwood
Hambley, T. J.....Ironwood
Lieberthal, M. J.....Ironwood
Lieberthal, Paul .....Ironwood
Maccani, William L.....Ironwood
Maloney, F. G.....Ironwood
Nezworski, H. T.....Ironwood
O'Brien, A. J.....Ironwood
Pierpont, D. C.....Ironwood
Pinkerton, H. A.....Ironwood
Pinkerton, W. J.....Bessemer
Prout, Robert I. C.....Wakefield
Rees, Thomas R.....Ironwood
Reynolds, F. L. S.....Ironwood
Root, Charles T.....Watersmeet
Sarvela, H. L.....Ironwood
Stevens, Charles E.....Bessemer
Tew, Wm. Ellwood.....Bessemer
Tressel, H. A.....Wakefield
Urquhart, C. C.....Ironwood
Wacek, W. H.....Ironwood

## GRAND TRAVERSE-LEELANAU-BENZIE COUNTIES

Brownson, J. J.....Kingsley
Bushong, B. B.....Traverse City
Covey, E. L.....Traverse City
Ellis, Claude I.....Suttons Bay
Flood, Robert E.....Northport
Gauntlett, J. W.....Traverse City
Goodrich, Dwight.....Traverse City
Holliday, George A.....Traverse City
Huston, Russell R.....Elk Rapids
Jones, Stewart R.....Suttons Bay
Kitson, V. H.....Elk Rapids
Kyselka, H. B.....Traverse City
Lemen, Chas. E.....Traverse City
Minor, Ernest B.....Traverse City
Murphy, Fred E.....Cedar
Osterlin, Mark.....Traverse City
Quinn, Henry M.....Copemish
Rennell, E. J.....Traverse City
Sargent, Leland E.....Kalkaska
Sheets, R. Philip.....Traverse City
Sladek, E. F.....Traverse City
Smiseth, Selmer P.....Suttons Bay
Stone, Fordyce H.....Beulah
Swanton, L.....Traverse City
Swartz, F. G.....Traverse City
Thacker, Fred R.....Frankfort
Thirlby, E. L.....Traverse City
Thompson, T. W.....Traverse City
Trautman, Frederick D.....Frankfort
Rowley, A. S.....Traverse City
Way, Lewis R.....Traverse City
Willard, Wm. G.....Benzonia
Zielke, I. H.....Traverse City
Zimmerman, J. G.....Traverse City

## GRATIOT-ISABELLA-CLARE COUNTIES

Aldrich, Alfred L.....Ithaca
Barstow, W. E.....St. Louis
Baskerville, C. M.....Mt. Pleasant
Becker, M. G.....Edmore
Budge, M. J.....Ithaca
Burch, L. J.....Mt. Pleasant
Burt, C. E.....Ithaca
Carney, T. J.....Alma
Dawson, R. E.....Blanchard
Drake, Wilkie M.....Breckenridge
DuBois, C. F.....Alma
Faber, Michael.....Ashley
Graham, B. J.....Alma
Graham, F. J.....Alma
Hall, B. C.....Pompeii
Hammerberg, Kuno.....Clare
Hobbs, A. D.....St. Louis
Howe, Leslie.....Breckenridge
Hubbard, M. C.....Vestaburg
Lamb, E. T.....Alma
McArthur, Stewart C.....Mt. Pleasant
McClinton, R. S.....Shephard
Rondot, E. F.....Lake
Sarven, J. D.....Middleton
Strange, Russell H.....Mt. Pleasant
Waggoner, R. L.....St. Louis
Wilcox, R. A.....Alma
Wilson, Earl C.....Harrison
Wolfe, Kenneth P.....Breckenridge
Wood, Cornelius B.....Clare

## HILLSDALE COUNTY

Allegar, W. E.....Pittsford
Bates, James A.....Camden
Bower, Charles T.....Hillsdale
Bowers, M. H.....Hillsdale
Clobridge, C. E.....Allen
Day, Luther W.....Jonesville
Ditmars, William H.....Jonesville
Fenton, D. W.....Reading
Fisk, F. B.....Jonesville
Green, B. F.....Hillsdale
Hamilton, A. J.....Hillsdale
Hanke, George R.....Ransom
Heald, J. E.....Hillsdale
Hodge, C. L.....Reading
Hughes, Henry F.....Hillsdale
Johnson, James H.....Hillsdale
Kline, Fred.....Litchfield
Mattson, H. F.....Hillsdale
Martindale, E. A.....Hillsdale
McFarland, O. G.....North Adams
McGavran, E. G.....Hillsdale
Miller, Harry C.....Hillsdale
Poppen, C. J.....Reading
Sterling, John S.....Jerome
Strom, A. W.....Hillsdale
Yeagley, J. L.....Waldron

## HOUGHTON-BARAGA-KEWEENAW COUNTIES

Abrams, James C.....Calumet
Aldrich, A. B.....Houghton
Aldrich, Addison D.....Houghton
Arminen, K. V.....Hancock
Bourland, Philip D.....Calumet
Brewington, George F.....Mohawk
Buckland, R. S.....Baraga
Coffin, Leslie E.....Painesdale
Cooper, C. A.....Hancock
Gregg, W. T. S.....Calumet
Hilmer, R. E.....Redridge
Joy, Henry M.....Calumet
King, William T.....Ahmeek
Kirton, Joseph R. W.....Calumet
LaBine, Alfred.....Houghton
Leo, L. S.....Houghton
Levin, Simon.....Houghton
McQueen, Donald K.....Laurium
Maas, R. J.....Houghton
Manthei, W. A.....Lake Linden
Marshall, Frank F.....L'Anse
Quick, James B.....Laurium
Roberts, Melvin D.....Hancock
Roche, A. C.....Calumet
Rupprecht, C. H.....Calumet
Scott, William P.....Houghton
Sloan, P. T.....Trimountain
Stern, Isadore D.....Houghton
Stewart, G. C.....Hancock
Stewart, J. C. B.....Painesdale
Van Slyke, William H.....Hancock
Waldie, George McLeod.....Hancock
Wickliffe, T. P.....Calumet

## HURON-SANILAC COUNTIES

Armitage, C. W.....Harbor Beach
Blanchard, E. W.....Deckerville
Caccamise, Jos. G.....Sebewaing
Cochran, Lewis E.....Peck
Seager, M. Cole.....Brown City
Gettel, Roy R.....Kinde
Gift, W. A.....Marlette
Hart, R. K.....Croswell
Herrington, Charles I.....Bad Axe
Herrington, Willet J.....Bad Axe
Holdship, William B.....Ubly
Howell, A. J.....Bay Port
Kirker, F. O.....Sandusky
Learmont, H. H.....Croswell
Lunn, J. O.....Harbor Beach
McNaughton, David D.....Argyle
Monroe, Duncan J.....Elkton
Morden, Charles B.....Bad Axe
Norgaard, Hal V.....Marlette
Oakes, C. W.....Harbor Beach
Ritsema, John.....Sebewaing
Robertson, Collin G.....Sandusky
Scheurer, C.....Pigeon
Thumme, Harrison F.....Sebewaing
Tweedie, G. Evans.....Sandusky
Tweedie, S. Martin.....Sandusky
Webster, John C.....Marlette

## INGHAM COUNTY

Albers, J. S.....East Lansing
Barnum, S. V.....Lansing
Barrett, C. D.....Lansing
Bartholomew, Henry S.....Lansing
Bauer, Theodore I.....Lansing
Behen, William C.....Lansing
Bellinger, E. G.....Lansing
Bolin, R.....Mason
Bradford, C. W.....Lansing
Breakey, Robt. S.....Lansing
Brubaker E.....Lansing
Brucker, Karl B.....Lansing
Bruegel, Oscar H.....East Lansing
Burhans, Robert.....Lansing
Cameron, W. J.....Lansing
Campbell, Archibald M.....Lansing
Carr, Earl I.....Lansing
Christian, L. G.....Lansing
Cook, R. J.....Lansing
Corsaut, J. C.....Mason
Culver, C. F.....Howell
Cushman, F. J.....Lansing
Darling, L. H.....Lansing
Davenport, C. S.....Lansing
DeVries, C. F.....Lansing
Doyle, Charles R.....Lansing
Doyle, C. P.....Lansing
Drolett, Fred J.....Lansing
Drolett, Lawrence.....Lansing
Dunn, F. C.....Lansing
Ellis, Bertha.....Lansing
Ellis, C. W.....Lansing
Finch, Russell L.....Lansing
Fisher, D. W.....Lansing
Fosget, Wilbur W.....Lansing
Foust, E. H.....Lansing
Freeland, O. H.....Mason
French, Horace L.....Lansing
Galbraith, Dugald A.....Lansing
Gardner, C. B.....Lansing
Goldner, R. E.....Lansing
Gunderson, G. O.....Lansing
Guy, Spencer D.....Lansing
Hart, L. C.....Lansing
Haynes, H. B.....Lansing
Haze, Harry A.....Lansing
Heckert, Frank.....Lansing
Heckert, J. K.....Lansing
Hendren, Owen.....Williamston
Henry, L.....Lansing
Hermes, Ed. J.....Lansing
Himmelberger, R. J.....Lansing
Hodges, Kenneth P.....Lansing
Huggett, Clare C. .....Lansing
Huntley, Fred M.....Lansing
Hurth, M. S.....Lansing
Johnson, K. H.....Lansing
Jones, Francis A.....Lansing
Kalmbach, R. E.....Lansing
Keim, C.....Lansing
Kent, Edith Hall.....Lansing
Kent, Herbert K.....Lansing
Krafts, L. C.....Leslie
Larabee, E. E.....Williamston
Loree, Maurice C.....Lansing
Ludlum, L. C.....Lansing
McConnell, E. G.....Lansing
McCorvie, C. Ray.....East Lansing
McCoy, Earl M.....Grand Ledge
McCrumb, R. R.....Lansing
McElmurry, N. K.....Perry
McGillicuddy, Oliver B.....Lansing
McGillicuddy, R. J.....Lansing
McIntyre, J. E.....Lansing
McNamara, William E.....Lansing
McPherson, E. G.....Stockbridge
Mercer, Walter E.....Webberville
Meyer, H. R.....Lansing
Miller, H. A.....Lansing
Miller, Robert E. (Honorary)..Lansing
Morrow, R.....Lansing
Niles, B. D.....Lansing
Ochsner, P. J.....Lansing
Olin, Richard M.....East Lansing
Osborn, Samuel.....Lansing
O'Sullivan, Gertrude.....Mason
Owen, A. E.....Lansing
Peacock, T. L.....Lansing
Phillips, R. H.....Lansing
Pinkham, R. A.....Lansing
Ponton, J.....Mason
Prall, H. J.....Lansing
Randall, O. M.....Lansing
Roberts, D. W.....Lansing
Robson, Edmund J.....Lansing
Rockwell, H. C.....Lansing
Rozan, J. S.....Lansing
Russell, Claude V.....Lansing
Sander, John F.....Lansing
Sanford, Thomas M.....Lansing
Seger, Fred L.....Lansing
Shaw, Milton.....Lansing
Slemons, C. C.....Lansing
Smith, H. M.....Lansing
Smith, Lillian R.....Lansing
Snell, D. M.....Lansing
Snyder, LeMoyne.....Lansing
Spencer, Perry.....Lansing
Steiner, A. A.....Lansing
Stiles, Frank.....Lansing
Strauss, P. C.....Lansing
Stucky, George.....Lansing
Toothaker, Kenneth.....Lansing
Towne, Lawrence C.....Lansing
Troost, F.....Holt
Vander Slice, E. R.....Lansing
Vander Zalm, T. P.....Lansing
Wadley, R.....Lansing
Warford, J. T.....Lansing
Webb, Roy O.....Okemos
Weinburgh, H. B.....Lansing
Welch, William.....Lansing
Wetzel, John O.....Lansing
Wight, W. G.....Lansing
Wiley, Harold W.....Lansing
Wellman, John.....Lansing
Willson, Richard S.....Lansing
Wilson, Harry A.....Lansing

## IONIA-MONTCALM COUNTIES

Bird, Wm. L.....Greenville
Bower, A. J.....Greenville
Bracey, L. E.....Sheridan
Braley, Frank .....Saranac
Crunican, A. J.....Hubbardston
Dunkin, Lloyd S.....Greenville
Duval, L. E.....Ionia
Ferguson, F. H.....Carson City
Fleming, J. C.....Pewamo
Fox, Harold M.....Portland
Fuller, Rudolphus W.....Crystal
Geib, O. P.....Carson City
Hansen, M. M.....Greenville
Hargrave, F. A. (Emeritus).....Palo
Hay, John R.....Saranac
Hoffs, M. A.....Lake Odessa
Johns, Joseph J.....Ionia
Johnson, F. A.....Greenville
Kelsey, L. E.....Lakeview
Kling, V. F.....Ionia
Laughlin, A. I.....Clarksville
Lilly, Isaac S.....Stanton
Lintner, Roy C.....Ionia
Marsh, F. M.....Ionia
Marston, L. L.....Lakeview
Maynard, Herbert M.....Ionia
McCann, John J.....Ionia
Norris, William W.....Portland
Peabody, C. H.....Lake Odessa
Pankhurst, C. T.....Ionia
Robertson, P. C.....Ionia
Swift, E. R.....Lakeview
Van Dellen, Jerrian.....Lyons
Van Loo, J. A.....Belding
Weaver, Harry B.....Greenville
Whitten, R. R.....Ionia

## JACKSON COUNTY

Ahronheim, J. H.....Jackson
Alter, R. H.....Jackson
Anderson, W. B.....Jackson
Baker, G. M.....Parma
Balconi, Henry.....Brooklyn
Bartholic, F. W.....Grass Lake
Brown, H. A.....Jackson
Bullen, G. R.....Jackson
Chabut, H. M.....Jackson
Clarke, C. S.....Jackson
Cochrane, Wayne A.....Jackson
Cooley, Randall M.....Jackson
Corley, C.....Jackson
Corley, Ennis.....Jackson
Cox, Ferdinand.....Jackson
Crowley, Edward D.....Jackson
Culver, Guy D.....Stockbridge
DeMay, C. E.....Jackson
Dengler, C. R.....Jackson
Edmonds, J. M.....Horton
Enders, W. H.....Jackson
Finton, Walter L.....Jackson
Foust, W. L.....Grass Lake
Gibson, F. J.....Jackson
Glover, H. G.....Jackson
Greenbaum, Harry.....Jackson
Hackett, T. E.....Jackson
Hanft, Cyril F.....Springport
Hanna, R. J.....Jackson
Hardie, G. C.....Jackson
Harris, Lester J.....Jackson
Hicks, Glenn C.....Jackson
Hungerford, P. R.....Concord
Huntley, W. B.....Jackson
Hurley, H. L.....Jackson
Kudner, Don F.....Jackson
Kugler, J. C.....Jackson
Lake, William H.....Jackson
Lathrop, William W.....Jackson
Lawton, L. B.....Leslie
Leahy, E. O.....Jackson
Leonard, Clyde A.....Jackson
Lewis, E. F.....Jackson
Ludwick, J. E.....Jackson
McGarvey, W. E.....Jackson
McLaughlin, M. J.....Jackson
Meads, J. B.....Jackson
Munro, C. D.....Jackson
Munro, James E.....Jackson
Murphy, B. M.....Jackson
Newton, R. E.....Jackson
O'Meara, James J.....Jackson
Page, John W.....Jackson
Peterson, E. S.....Jackson
Philips, David P.....Jackson
Porter, H. W.....Jackson
Pray, Frank F.....Jackson
Pray, George R.....Jackson
Ransom, F. G.....Jackson
Riley, Philip A.....Jackson
Roberts, Arthur J.....Jackson
Schepeler, Cortlandt W.....Brooklyn
Scheurer, P. A.....Manchester
Schmidt, T. E.....Jackson
Scott, John A.....Jackson
Seybold, G. A.....Jackson
Shaeffer, A. M.....Jackson
Smith, John C.....Jackson
Snow, W. R.....Jackson
Speck, John W.....Jackson
Spicer, W. E.....Jackson
Stewart, L. L.....Jackson
Stewart, Maitland N.....Jackson
Susskind, M. V.....Jackson
Tate, Cecil E.....Vandercook Lake
Thalner, L. F.....Jackson
Thayer, E. A.....Jackson
Townsend, J. W.....Vandercook Lake
Tuthill, F. D.....Concord
Van Schoick, J. D.....Hanover
Van Schoick, Frank.....Jackson
Wertenberger, M. D.....Jackson
Wholihan, John W.....Michigan Center
Wickham, W. A.....Jackson
Wilson, E. D.....Jackson
Wilson, E. G.....Jackson
Wilson, N. D.....Jackson
Winter, G. E.....Jackson
Woyt, S. W.....Jackson

## KALAMAZOO - VAN BUREN COUNTIES

Aach, Hugo .....Kalamazoo
Adams, R. U.....Kalamazoo
Alexander, C. A.....Kalamazoo
Ames, Edward, (Emeritus) Kalamazoo
Andrews, F. T.....Kalamazoo
Andrews, Sherman .....Kalamazoo
Armstrong, Robert J.....Kalamazoo
Balch, Ralph E.....Kalamazoo
Banner, Lawrence R.....Kalamazoo
Barnebee, J. W.....Kalamazoo
Barrett, F. Elizabeth.....Kalamazoo
Behan, Gerald C.....Galesburg
Bennett, Charles L.....Kalamazoo
Berry, J. F.....Kalamazoo
Bodmer, H. C.....Kalamazoo
Bope, Wm. P.....Decatur
Borgman, Wallace .....Kalamazoo
Boothby, F. M.....Lawrence
Boys, C. E.....Kalamazoo
Braden, G. M.,(Honorary).....Scotts
Brooks, Ervin D.....Kalamazoo
Brown, I. W.....Kalamazoo
Burns, J. T.....Kalamazoo
Caldwell, George H.....Kalamazoo
Cobb, Horace R.....Kalamazoo
Collins, Ward E.....Kalamazoo
Cook, R. G.....Kalamazoo
Crawford, Kenneth .....Kalamazoo
Crum, Leo J.....Kalamazoo
Dean, Ray.....Three Rivers
Den Bleyker, Walter.....Kalamazoo
De Witt, L. H.....Kalamazoo
Diephus, Bert.....South Haven
Dowd, B. J.....Kalamazoo
Doyle, F. M.....Kalamazoo
Ertell, Wm. Francis.....Kalamazoo
Fast, R. B.....Kalamazoo
Fortner, R. J.....Three Rivers
Fulkerson, C. B.....Kalamazoo
Fuller, P. M.....Kalamazoo
Fuller, R. T.....Kalamazoo
Gerstner, Louis .....Kalamazoo
Giffen, John R.....Bangor
Gilding, Joseph .....Vicksburg
Gilding, Z. L.....Vicksburg
Grant, Frederick E.....Kalamazoo
Greenman, Newton H.....Decatur
Gregg, Sherman .....Kalamazoo
Harter, Randolph S.....Schoolcraft
Henwood, A. R.....Kalamazoo
Hildreth, R. C.....Kalamazoo
Hobbs, Edw. J.....Galesburg
Hodgman, Albert .....Kalamazoo
Hoebeke, Wm. G.....Kalamazoo
Hubbell, R. J.....Kalamazoo
Huyser, Wm. C.....Kalamazoo
Ilgenfritz, F. M.....Kalamazoo
Irwin, Wm. D.....Kalamazoo
Itzen, J. F.....South Haven
Jackson, John B.....Kalamazoo
Jennings, W. O.....Kalamazoo
Kenzie W. N.....Camp Custer
Kingma, J. G.....Decatur
Klerk, W. J.....Kalamazoo
Koestner, P. A.....Kalamazoo
Lambert, R. H.....Kalamazoo
Lang, W. W.....Kalamazoo
La Victoire, Isaac N.....Kalamazoo
Light, Richard U.....Kalamazoo
Light, S. Rudolph.....Kalamazoo
Littig, John .....Kalamazoo
Lowe, Edwin G.....Bangor
MacGregor, J. R.....Kalamazoo
Malone, James G.....Kalamazoo
Maxwell, J. Charles.....Paw Paw
McCarthy, J. S. .....Kalamazoo
McIntyre, Charles H.....Kalamazoo
McNabb, A. A.....Lawrence
McNair, Rush .....Kalamazoo
Morter, Roy A.....Kalamazoo
Murphy, Norman D.....Bangor
Murry, W. A.....Kalamazoo
Nibbelink, Benjamin .....Kalamazoo
Osborne, Charles E.....Vicksburg
Patmos, Martin .....Kalamazoo
Peelen, J. W.....Kalamazoo
Peelen, Mathew .....Kalamazoo
Penoyer, C. L.....South Haven
Perry, Clifton .....Kalamazoo
Pratt, F. A.....Kalamazoo
Prentice, Hazel R.....Kalamazoo
Pullon, A. R.....Kalamazoo
Rickert, J. A.....Allegan
Rigterink, H. A.....Kalamazoo
Riley, G. M.....Gobles
Rockwell, A. H., (Honorary) Kalamazoo (Honorary)
Rockwell, Donald C.....Kalamazoo
Sage, E. D.....Kalamazoo
Scholten, D. J.....Kalamazoo
Scholten, Wm.....Kalamazoo
Schrier, Paul.....Kalamazoo
Schrier, Thomas.....Comstock
Sears, H. A.....Kalamazoo
Shackleton, Wm. E.....Kalamazoo
Shepard, Benjamin A.....Kalamazoo
Shook, R. W.....Kalamazoo
Southworth, M. N.....Schoolcraft
Squires, David E.....Kalamazoo
Stewart, L. H.....Kalamazoo
Ten Houten, Charles.....Paw Paw
Unrath, Clara.....Kalamazoo
Upjohn, E. Clifford.....Kalamazoo
Upjohn, L. N.....Kalamazoo
Van Ness, J. Howard.....Allegan
Van Urk, Thomas.....Kalamazoo
Walker, Burt D.....Kalamazoo
Weirich, Richard.....Marcellus
West, A. E.....Kalamazoo
Westcott, L. E.....Kalamazoo
Wilbur, E. P.....Kalamazoo
Wilkinson, Chester A.....Kendall
Williams, F. N.....Hartford
Youngs, A. S.....Kalamazoo
Youngs, C. A.....Kalamazoo
Young, Williams R.....Lawton

## KENT COUNTY

Aitken, George T.....Grand Rapids
Adams, F. A.....Grand Rapids
Altland, J. K.....Lowell
Bachman, G. A.....Grand Rapids
Baert, George H.....Grand Rapids
Baker, Abel J.....Grand Rapids
Ballard, M. S.....Grand Rapids
Beeman, C. E.....Grand Rapids
Beets, W. Clarence.....Grand Rapids
Bell, Charles M.....Grand Rapids
Bellerue, A. R.....Grand Rapids
Bettison, Wm. L.....Grand Rapids
Billings, Elton P.....Grand Rapids
Bishop, T. P.....Grand Rapids
Blackburn, Henry M.....Grand Rapids
Boet, F. A.....Grand Rapids
Bond, George Lewis.....Grand Rapids
Bosch, L. C.....Grand Rapids
Brayman, C. W.....Cedar Springs
Brook, Jacob D.....Grandville
Brotherhood, J. S.....Grand Rapids
Browning, Eugene S.....Grand Rapids
Burling, Wesley M.....Grand Rapids
Butler, Wm. J.....Grand Rapids
Cameron, Don Bruce.....Grand Rapids
Campbell, Alexander M..Grand Rapids
Cardwell, John F.....Grand Rapids
Chadwick, W. L.....Grand Rapids
Chamberlain, L. H.....Grand Rapids
Chandler, Donald.....Grand Rapids
Cilley, E. O.....Grand Rapids
Claytor, R. W.....Grand Rapids
Collisi, H. S.....Grand Rapids
Colvin, W. G.....Grand Rapids
Corbus, Burton R.....Grand Rapids
Crane, Charles V.....Grand Rapids
Crane, Harold D.....Grand Rapids
Cuncannan, M. E.....Grand Rapids
Currier, F. P.....Grand Rapids
Dales, Ernest W.....Grand Rapids
Davis, D. B.....Grand Rapids
De Boer, Guy Wm.....Grand Rapids
DeJong, C.....Grand Rapids
Dell, E. E.....Sand Lake
DeMaagd, Gerald.....Rockford

DeMol, Richard J.....Grand Rapids
Denham, R. H.....Grand Rapids
DePree, Isla G.....Grand Rapids
DeVel, Leon.....Grand Rapids
DeVries, Daniel.....Grand Rapids
Dewar, M. M.....Grand Rapids
Dixon, Willis L.....Grand Rapids
Doran, Frank.....Grand Rapids
Droste, James C.....Grand Rapids
Eaton, Robert M.....Grand Rapids
Eggleston, H. R.....Grand Rapids
Fellows, Kenneth E.....Grand Rapids
Ferguson, Lynn A.....Grand Rapids
Ferguson, Ward S.....Grand Rapids
Ferrand, L.....Rockford
Fitts, Ralph L.....Grand Rapids
Foshee, J. C.....Grand Rapids
Frantz, C. H.....Grand Rapids
Gaikema, E. W.....Grand Rapids
Gainey, James J.....Grand Rapids
German, William .....Grand Rapids
Gillett, O. G.....Grand Rapids
Grant, Lee O.....Grand Rapids
Grant, Lucille B.....Grand Rapids
Graybiel, George.....Caledonia
Griffith, L. S.....Grand Rapids
Haas, John H.....Grand Rapids
Hagerman, D. B.....Grand Rapids
Hammond, T. W.....Grand Rapids
Hardy, Faith F.....Grand Rapids
Hayes, L. W.....Howard City
Heetderks, Dewey R.....Grand Rapids
Henry, Jr., James.....Grand Rapids
Herrick, Ruth.....Grand Rapids
Hill, A. M.....Grand Rapids
Hilt, L. M.....Grand Rapids
Hodgen, J. T.....Grand Rapids
Holcomb, John N.....Grand Rapids
Holcomb, J. W.....Grand Rapids
Holdsworth, M. J.....Grand Rapids
Hollander, Stephen.....Grand Rapids
Hoogerhyde, Jack.....Grand Rapids
Houghton, G. D.....Caledonia
Hufford, A. R.....Grand Rapids
Hunderman, Edward....Grand Rapids
Hutchinson, Robert J....Grand Rapids
Hyland, W. A.....Grand Rapids
Irwin, Thomas C.....Grand Rapids
Jaracz, W. J.....Grand Rapids
Kemmer, Thomas R.....Grand Rapids
Kendall, Eugene L.....Grand Rapids
Klaus, C. D.....Grand Rapids
Kniskern, P. W.....Grand Rapids
Kooistra, Henry P.....Grand Rapids
Kremer, John.....Grand Rapids
Kreulen, H. J.....Grand Rapids
Laird, Robert G.....Grand Rapids
Lamb, George F.....Grand Rapids
Lanning, N. E.....Grand Rapids
Lanting, D. B.....Grand Rapids
Le Roy, Simeon.....Grand Rapids
Lieffers, Harry.....Grand Rapids
Lyman, William D.....Grand Rapids
MacPherson, Alexander G.....
Grand Rapids
Marrin, M. M.....Grand Rapids
Marsh, J. P.....Grand Rapids
Maurits, Reuben.....Grand Rapids
McBride, George L.....Grand Rapids
McKenna, J. L.....Grand Rapids
McKinlay, L. N.....Grand Rapids
McRae, John H.....Grand Rapids
Meengs, Jacob Earl.....Grand Rapids
Miller, J. Duane.....Grand Rapids
Miller, John J.....Marne
Mitchell, H. C.....Grand Rapids
Mitchell, W. B.....Grand Rapids
Moen, Cornetta G.....Grand Rapids
Moleski, Stanley L.....Grand Rapids
Moll, Arthur M.....Grand Rapids
Mollman, Arthur.....Grand Rapids
Moore, Vernor M.....Grand Rapids
Morrill, Donald M.....Detroit
Mulder, J. D.....Grand Rapids
Murphy, M. J.....Grand Rapids
Nelson, A. R.....Grand Rapids
Nesbitt, E. N.....Grand Rapids
Noordewier, Albert.....Grand Rapids
Northhouse, Peter B.....Grandville
Northrup, William.....Grand Rapids
Nyland, Albertus (Honorary).....
Grand Rapids
Oliver, W. W.....Grand Rapids
Patterson, Winfred P....Grand Rapids
Pedden, Jr., J. R.....Grand Rapids
Pott, A. L.....Grand Rapids
Pyle, Henry J.....Grand Rapids
Quigley, Ruth E.....Grand Rapids
Ralph, Paul L.....Grand Rapids
Reed, Torrance.....Grand Rapids
Rigterink, J. W.....Grand Rapids
Riley, G. L.....Grand Rapids
Roberts, Mortimer E.....Grand Rapids
Robertson, F. Dunbar...Grand Rapids
Robinson, Harold.....Grand Rapids
Rodgers, W. L.....Grand Rapids
Rogers, John R.....Grand Rapids
Roth, Emil M.....Grand Rapids
Schermerhorn, L. J.....Grand Rapids
Schnoor, E. W.....Grand Rapids
Sevensma, E. S.....Grand Rapids
Sevey, L. E.....Grand Rapids
Shepard, B. H.....Lowell
Shellman, Millard W.....Grand Rapids
Smith, A. B.....Grand Rapids
Smith, Edwin M.....Grand Rapids
Smith, Ferris N.....Grand Rapids
Smith, R. Earle.....Grand Rapids
Smith, Richard R.....Grand Rapids
Snapp, Carl F.....Grand Rapids
Snyder, Clarence.....Grand Rapids
Southwick, George H....Grand Rapids
Steffensen, W. H.....Grand Rapids
Stonehouse, G. G.....Grand Rapids
Stover, Virgil E.....Grand Rapids
Sugg, Cullen E.....Grand Rapids
Ten Have, J.....Grand Rapids
Tesseine, A. J.....Grand Rapids
Teusink, J. H.....Cedar Springs
Thompson, Sr., Archibald B.....
Grand Rapids
Thompson, Athol B.....Grand Rapids
Thompson, P. L.....Grand Rapids
Tidey, Marcus B.....Grand Rapids
Tiffany, Joseph C.....Grand Rapids
Tolley, Edw. W.....Grand Rapids
Torgerson, Wm. R.....Grand Rapids
Van Bree, R. S.....Grand Rapids
Vanden Berg, Henry J...Grand Rapids
Van Duine, H. J.....Byron Center
Van Solkema, Andrew...Grand Rapids
Van Solkema, Arthur.....Grandville
Van Woerkom, Daniel...Grand Rapids
Veldman, Harold E.....Grand Rapids
Veenboer, Wm. H.....Grand Rapids
Vis, William R.....Grand Rapids
Votey, Frank A.....Grand Rapids
Vyn, J. D.....Grand Rapids
Warnshuis, Frederick C. (Honorary
Life Member) San Francisco, Cal.
Webb, Rowland.....Grand Rapids
Webster, G. W.....Grand Rapids
Wells, Merrill.....Grand Rapids
Wenger, A. V.....Grand Rapids
Wenger, John N.....Coopersville
Westrate, Paul.....Grand Rapids
Whalen, John M.....Grand Rapids
Whinery, Joseph B., Sr...Grand Rapids
Willits, P. W.....Grand Rapids
Wilson, Wm. E.....Grand Rapids
Winter, Garrett E.....Grand Rapids
Wolfe, H. C.....Grand Rapids
Woodburne, A. R.....Grand Rapids
Wright, John M.....Grand Rapids
Yegge, J. P.....Kent City

## LAPEER COUNTY

Berghorst, John.....Imlay City
Best, Herbert M.....Lapeer
Bishop, G. C.....Almont
Burley, David H.....Almont
Chapin, Clarence D.....Columbiaville
Crankshaw, D. W.....Imlay City
Dixon, Robert L.....Lapeer
Dorland, Clark.....Lapeer
Hanna, Fred R.....Lapeer
Jackson, Carl C.....Imlay City
McBride, J. R.....North Branch
Merz, Henry G.....Lapeer
O'Brien, Daniel J.....Lapeer
Smith, J. E. R.....Imlay City
Thomas, J. Orville.....North Branch
Tinker, F. A. (Honorary).....Lapeer
Zemmer, H. B.....Lapeer

## LENAWEE COUNTY

Abraham, A. O.....Hudson
Blanchard, L. E.....Hudson
Bland, J. P.....Adrian
Case, C. W.....Onsted
Chase, Armetus W.....Adrian
Claflin, G. M.....Deerfield
Clark, A. D.....Adrian
Claxton, W. T.....Britton
Colbath, W. E.....Adrian
Growt, B. H.....Addison
Hall, George C.....Adrian
Hammel, H. H.....Tecumseh
Hambly, S. B.....Onsted
Hardy, P. B.....Tecumseh
Heffron, C. H.....Adrian
Heffron, Howard H.....Adrian
Helzerman, Ralph F.....Tecumseh
Hewes, A. B.....Adrian
Hornsby, W. B.....Clinton
Howland, F. A.....Adrian
Jewett, Jr., William E.....Adrian
Lamley, Arthur E.....Blissfield
Lane, C. S.....Hudson
Loveland, Horace H.....Tecumseh
MacKenzie, W. S.....Adrian
McCue, F. J.....Hudson
Marsh, R. G. B.....Tecumseh
Miller, Perry Lynford.....Adrian
Morden, Esli T.....Adrian
Murawa, V. J.....Deerfield
Patmos, Bernard.....Adrian
Peters, W. L.....Morenci
Raabe, E. C.....Morenci
Rogers, J. D.....Adrian
Spalding, I. L.....Hudson
Stafford, Leo J.....Adrian
Tubbs, R. V.....Blissfield
Van Dusen, C. A.....Blissfield
Whitney, O.....Adrian
Wood, A. C.....Adrian

## LIVINGSTON COUNTY

Anderson, R. S.....Howell
Backe, John C.....Howell
Brigham, Jeannette.....Howell
Brueckner, H. H.....Howell
Burt, K. L.....Howell
Cameron, Duncan A.....Brighton
Glenn, Bernard H.....Fowlerville
Hendron, J. J.....Fowlerville
Hill, Harold C.....Howell
Huntington, H. G.....Howell
Laboe, Edward W.....Howell
Leslie, G. L.....Howell
McGregor, Archie J.....Brighton
McIndoe, R. Bruce.....Howell
Mellus, H. P.....Brighton
Sigler, C. L.....Pinckney
Sigler, Hollis L.....Howell
Stephens, D. C.....Howell
Toan, J. W.....Howell

## LUCE COUNTY

Bohn, Frank P.....Newberry
Campbell, E. H.....Newberry
Gibson, R. E. L.....Newberry
Hart, C. D.....Newberry
Perry, Henry E.....Newberry
Purmont, Jr., William R....Newberry
Rehn, A. T.....Newberry
Spinks, Robert Earl.....Newberry
Surrell, M. A.....Newberry
Swanson, Geo. F.....Newberry
Toms, C. B.....Newberry

## MACOMB COUNTY

Allen, Leroy K.....Roseville
Bailey, R.....St. Clair Shores
Banting, O. F.....Richmond
Berry, Henry G.....Mt. Clemens
Bower, A. B.....Armada
Caster, E. Wilbur.....Mt. Clemens
Croman, Jr., Joseph M....Mt. Clemens
Croman, Sr., Joseph M....Mt. Clemens
Curlett, J. E.....Roseville
Dudzinski, E. J.....New Baltimore
Engels, John A.....Richmond
Fluemer, Oswald.....Mt. Clemens
Hawley, R. E.....St. Clair Shores
Heine, Austin W.....Mt. Clemens
Kane, Wm. J.....Mt. Clemens
Lynch, Russell.....Centerline
Meek, Charles.....New Baltimore
Moore, G. F.....Mt. Clemens
Norton, W. H.....Mt. Clemens
Peltier, Stanley.....Mt. Clemens
Reichman, Joseph J.....Mt. Clemens
Reitzel, Rufus H.....Mt. Clemens
Rivard, C. H.....St. Clair Shores
Rothman, A. M.....East Detroit
Russell, T. P.....Centerline
Salot, R. F.....Mt. Clemens
Scher, Joseph N.....Mt. Clemens
Seaman, John.....New Haven
Smith, M. C.....Mt. Clemens
Sturm, Fred A.....St. Clair Shores
Thompson, A. A.....Mt. Clemens
Ullrich, R. W.....Mt. Clemens
Wilde, M. M.....Warren
Wiley, Bruce.....Utica
Wiley, Herbert H.....Utica
Wolfson, Victor H.....Mt. Clemens

## MANISTEE COUNTY

Bryan, Kathryn M.....Manistee
Grant, C. L.....Manistee
Fairbanks, Stephen.....Luther
Hansen, E. C.....Manistee
Jamieson, David A.....Arcadia
Knopa, John F.....Manistee
Lewis, Lee A.....Manistee
MacMullen, Harlen.....Manistee
McKay, A. A.....Midland
Meade, Wm.....New Orleans, La.
Miller, E. B.....Manistee
Mullenmeister, H. F.....Bear Lake
Norconk, Ward H.....Bear Lake
Oakes, Ellery A.....Manistee
Ramsdell, Homer A.....Manistee
Switzer, Lars W.....Manistee

## MARQUETTE-ALGER COUNTIES

Barnes, Haldor .....Munising
Bennett, Arthur K.....Marquette
Bertucci, J. P.....Ishpeming
Blake, H. P.....Marquette
Bottum, Charles N.....Marquette
Burke, R. A.....Palmer
Cooperstock, M.....Marquette
Corcoran, W. A.....Ishpeming
Corneliuson, Goldie B.....Lansing
Crane, J. P.....Ishpeming
Drury, Charles P.....Marquette
Elzinga, E. R.....Marquette
Erickson, Arvid W.....Ispheming
Felch, Theodore A.....Ishpeming
Fenning, F. A.....Marquette
Hartt, P. P.....Ishpeming
Hirwas, C. L.....Marquette
Hornbogen, D. P.....Marquette
Howe, L. W.....Marquette
Janes, R. Grant.....Marquette
Le Golvan, C.....Marquette
Markham, H. B.....Marquette
Mudge, W. A.....Negaunee
Niemi, O. I.....Marquette
Picotte, Wilfrid S.....Ishpeming
Robbins, Nelson J.....Negaunee
Sicotte, Isiah .....Michigamme
Swinton, A. L.....Marquette
Talso, Jacob.....Ishpeming
Vandeventer, Vivian H.....Ishpeming
Van Riper, Paul.....Champion

## MASON COUNTY

Blanchett, Victor J.....Custer
Farrier, Robert.....Ludington
Heysett, Fredk. W.....Ludington
Hoffman, Howard.....Ludington
Kirwan, Edward J.....Ludington
Martin, Wm. S.....Ludington
Paukstis, Chas. .....Ludington
Scott, E. R.....Ludington
Spencer, C. M.....Scottville
Switzer, G. O. (Honorary)..Ludington

## MECOSTA-OSCEOLA COUNTIES

Bruggema, Jacob .....Evart
Bunce, E. P.....Trufant
Campbell, James B.....Big Rapids
Chess, Leo F.....Reed City
Clark, Chester.....Morley
Franklin, Benjamin L.....Remus
Grieve, Glenn.....Big Rapids
Igloe, Max C.....Big Rapids
Kelsey, L. E.....Lakeview
Kilmer, Paul B.....Reed City
McIntyre, Donald.....Big Rapids
McGrath, V. J.....Reed City
Peck, Louis K.....Barryton
Power, C. J.....Remus
Soper, Charles L.....Barryton
Treynor, Thomas P.....Big Rapids
Yeo, Gordon H.....Big Rapids

## MENOMINEE COUNTY

Barkman, F. J.....Menominee
Berg, Laurence A.....Menominee
Flanagan, Clarence B.....Menominee
Jones, Wm. S.....Menominee
Kaye, J. T.....Menominee
Kerwell, K. C.....Stephenson
Mason, Stephen C.....Menominee
McComb, Earl V.....Menominee
Peterson, A. R.....Daggett
Sawbridge, Edward .....Stephenson
Setheny, Henry T.....Menominee
Towey, J. W.....Powers

## MIDLAND COUNTY

Burkett, L. V.....Midland
Grewe, N. C.....Midland
High, C. V.....Midland
McCallum, Charles .....Midland
Maynard, W. A.....Coleman
Meisel, Edward H.....Midland
Pike, Melvin H.....Midland
Rice, Robert E.....Midland
Sherk, J. H.....Midland
Towsley, W. D.....Midland

## MONROE COUNTY

Acker, William F.....Monroe
Ames, Florence.....Monroe
Banister, E. B.....Monroe
Barker, Vincent L.....Monroe
Blanchett, A. D.....Monroe
Bond, W. W.....Monroe
Cooper, E. M.....Rockwood
Denman, Dean C.....Monroe
Dusseau, S. V.....Erie
Ewing, R. T.....Monroe
Gelhaus, Wm. J.....Monroe
Glenn, Audrey.....Monroe
Golvinaux, C. J.....Monroe
Graubner, F. L.....Monroe
Gray, H. T.....Carleton
Heffernan, John F.....Carleton
Hunter, M. A.....Monroe
Landon, Herbert W.....Monroe
Long, Edgar C.....Monroe
McDonald, T. A.....Monroe
McGeoch, R. W.....Monroe
McMillin, J. H.....Monroe
Newcomb, S. O.....Ida
Parmelee, O. E.....Lambertville
Penzotti, S. C.....Dundee
Reisig, A. H.....Monroe
Siffer, J. J.....Monroe
Smith, William A.....Petersburg
Stewart, W. H.....Petersburg
Stolpestad, C. T.....Monroe
Tomlinson, Ledyard .....Newport
Williams, Robert J.....Monroe
Williamson, George.....Dundee

## MUSKEGON COUNTY MEDICAL SOCIETY

August, R. V.....Muskegon Heights
Barnard, Helen S.....Muskegon
Bartlett, F. H.....Muskegon
Beers, C. W.....Holton
Bloom, C. J.....Muskegon
Boonstra, Frank .....Muskegon
Boyd, D. R.....Muskegon
Bradshaw, P. S.....Muskegon
Cavanaugh, R. G.....Muskegon
Chapin, W. S.....Muskegon Heights
Closz, H. F.....Muskegon
Cohan, S. G.....Muskegon
Colignon, C. M.....Muskegon
Collier, C. C.....Whitehall
D'Alcorn, E. N.....Muskegon
Dasler, A. F.....Muskegon Heights
Diskin, Frank .....Muskegon
Douglas, R. J.....Muskegon
Drummond, S. J.....Casnovia
Durham, C. J.....Muskegon
Bowers, J. G.....Muskegon
Eckerman, C. T.....Muskegon
Egan, A. B.....Muskegon
Fillingham, Enid.....Muskegon
Fleischman, C. B.....Muskegon
Fleishman, N. A.....Muskegon
Foss, E. O.....Muskegon
Garber, F. W.....Muskegon
Garland, J. O.....Muskegon
Gillard, J. L.....Muskegon
Goltz, Martha .....Montague
Hagen, W. A.....Muskegon
Hannum, F. W.....Muskegon
Harrington, A. F.....Muskegon
Harrington, R. J.....Muskegon
Hartwell, S. W.....Muskegon
Heneveld, John .....Muskegon
Holly, L. E.....Muskegon
Holmes, R. H.....Muskegon
Jackson, S. A.....Muskegon
Kane, T. J.....Muskegon
Keilin, Marie .....Muskegon
Kerr, H. J.....Muskegon
Kniskern, E. L.....Muskegon
LeFevre, George L.....Muskegon
LeFevre, Louis .....Muskegon
LeFevre, William M.....Muskegon
LaCore, O. M.....Muskegon Heights
Lauretti, E. J.....Muskegon
Laurin, V. S.....Muskegon
Loomis, J. L.....Muskegon
Loughery, H. B.....Muskegon
Meengs, M. B.....Muskegon Heights
Mandeville, C. B.....Muskegon
Medema, P. E.....Muskegon
Morford, F. N.....Muskegon
Morse, B. W.....Whitehall
Mulligan, A. W.....Muskegon
Oden, C. L. A.....Muskegon
Olson, R. G.....Muskegon Heights
Pangerl, Carl.....Muskegon Heights
Pettis, E. M.....Muskegon
Powers, L. I.....Muskegon
Pyle, H. J.....Muskegon
Quick, Paul A. (Honorary)..Muskegon
Risk, R. A.....Muskegon
Risk, R. D.....Muskegon
Spoor, A. A.....Muskegon
Stone, M. E.....Muskegon
Swartout, W. C.....Muskegon
Teifer, C. A.....Muskegon
Thieme, S. W.....Ravenna
Thornton, E. S.....Muskegon
Wilke, C. A.....Montague
Wilson, P. S.....Muskegon

## NEWAYGO COUNTY

Barnum, W. H.....Fremont
DeHaas, N.....Fremont
Drummond, P. .....Grant
Geerlings, Lambert .....Fremont
Geerlings, Willis .....Fremont
Lettings, D. .....Grant
Moore, H. R.....Newaygo
Post, Guy .....White Cloud
Stryker, O. D.....Fremont
Tompsett, Arthur C.....Hesperia

## NORTHERN MICHIGAN MEDICAL SOCIETY

**Antrim, Charlevoix, Cheboygan, Emmet**

Armstrong, Robt. B., Sr....Charlevoix
Burns, Dean C.....Petoskey
Chapman, W. E.....Cheboygan
Christie, E. A.....Cheboygan
Conkle, Guy C.....Boyne City
Conway, Wm. S.....Petoskey
Craddock, John.....Mackinaw City
Dean, Carleton.....Charlevoix
Duffie, Don Hastings....Central Lake
Engle, Ralph D.....Petoskey
Frank, Gilbert E.....Harbor Springs
Grillet, F. F. .....Alanson
Harrington, H. M.....East Jordan
Huebner, A. C.....Onaway
King, George W.....Charlevoix
Larson, W. E.....Levering
Lashmet, Floyd H.....Petoskey
MacGregor, J. G.....Boyne City
Mast, W. H.....Petoskey
Mayne, Frederick C.....Cheboygan
McMillan, Fraley .....Charlevoix
Miller, Samuel L.....Cheboygan
Monfort, Robert .....Onaway
Palmer, Russell.....St. James
Parks, W. H.....Petoskey
Reed, Wilbur F. (Honorary) Cheboygan
Rodgers, John .....Bellaire
Saltonstall, Gilbert B.....Charlevoix
Stringham, J. R.....Cheboygan
Tiffany, A. C.....Mackinaw City
VanLeuven, B. H.....Petoskey

## OAKLAND COUNTY

Abbott, V. C.....Pontiac
Aschenbrenner, Z. R.....Farmington
Bachelder, Frank S.....Pontiac
Baker, Frederick A.....Pontiac
Baker, Robert H.....Pontiac
Barker, Howard B.....Pontiac
Bauer, Ernest W.....Hazel Park
Beck, O. O.....Birmingham
Benning, C. H.....Peoria, Ill.
Borland, Alexander .....Pontiac
Bradley, Everett L.....Pontiac
Burke, Chauncey G.....Pontiac
Burt, F. J.....Holly
Butler, Samuel A.....Pontiac
Cameron, D. A.....Royal Oak
Castell, Daniel G.....Pontiac
Christie, J. W.....Pontiac
Church, J. E.....Pontiac
Cobb, Leon F.....Pontiac
Colvin, N. B.....Pontiac
Cook, Ernest A.....Pontiac
Cooper, Robert J.....Pontiac
Corbit, Aileen B.....Oxford
Crissman, H. C.....Ferndale
Cudney, Ethan B.....Pontiac
Dahlgren, Carl.....Keego Harbor
Darling, Jr., C. G.....Pontiac
Ekelund, C. T.....Pontiac
Farnham, Lucius A.....Pontiac
Ferris, Ralph G.....Birmingham
Fitzpatrick, Francis .....Pontiac
Fox, John W.....Pontiac
Furlong, Harold A.....Pontiac
Gatley, L. Warren.....Pontiac
Gerls, Frank B.....Pontiac
German, Frank D.....Pontiac
Gordon, J. H.....Birmingham
Grant, Wm. A.....Milford
Green, Wm. M.....Pontiac
Halsted, Lee H.....Farmington
Hammer, Carl W.....Oxford
Hammonds, E. E.....Birmingham
Harvey, Campbell .....Pontiac
Hasner, R. B.....Royal Oak
Hathaway, Clarence L.....Lake Orion
Hathaway, Wm.....Rochester
Henry, Colonel R.....Ferndale
Hassberger, J. B.....Birmingham
Huffman, M. R.....Milford
Howlett, E. V.....Pontiac
Hoyt, D. F.....Pontiac
Hume, T. W. K.....Auburn Heights
Hurst, Daniel D.....Pleasant Ridge
Johnson, C. E.....Pontiac
Jones, Morrell M.....Pontiac
Kelly, Wm. H.....Pontiac
Kemp, W. Lloyd.....Birmingham
Kupka, Edward .....Pontiac
Lambie, John S.....Pontiac
Larson, B. T.....Pontiac
Lawler, C. F.....Birmingham
Lewis, Sol M.....Ferndale
Linsday, E. J.....Walled Lake
Margraves, Edmund D.....Royal Oak
McConkie, J. P.....Birmingham
McNeill, H. H.....Pontiac
Meinke, Herman A.....Royal Oak
Mercer, Frank A.....Pontiac
Miller, Raymond E.....Clarkston
Mitchell, B. M.....Pontiac
Mooney, C. A.....Ferndale
Morrison, J. S.....Royal Oak
Murtha, A. V.....Pontiac
Neafie, Chas. A.....Pontiac
Norup, John .....Berkley
Ohlmacher, A. P.....Royal Oak
Olsen, Richard E.....Pontiac
Pauli, Theodore H.....Pontiac
Pool, H. H.....Pontiac
Prevette, Isaac C.....Pontiac
Raynale, George P.....Birmingham
Reid, F. T.....Clawson
Riker, Aaron D.....Pontiac
Roehm, Harold R.....Birmingham
Rooks, Wendell H..... Pontiac
St. John, Harold A.....Pontiac
Scott, Francis A.....Rochester
Seaborn, A. J.....Royal Oak
Shearer, John P.....Pontiac
Sheffield, L. C.....Pontiac
Sherman, G. A.....Pontiac
Sibley, H. A.....Pontiac
Simpson, E. K.....Pontiac
Spears, M. L.....Pontiac
Spencer, Lloyd H.....Royal Oak
Spoehr, Eugene L.....Ferndale
Stahl, Harold E.....Oxford
Stanley, Wm. F.....Ferndale
Starker, Clarence T.....Pontiac
Steinberg, Norman.....Royal Oak
Stolpman, A. K.....Birmingham
Strain, C. S.....Rochester
Sutherland, Clark J.....Clarkston
Sutton, Palmer E.....Royal Oak
Terry, Stuart.....Pontiac
Tuck, R. G.....Pontiac
Volk, V. .....Saginaw
Wagley, P. V.....Pontiac
Wagner, Ruth E.....Royal Oak
Wiers, W. W.....Royal Oak
Williams, H. W.....Pontiac
Yoh, Harry B.....Pontiac
Young, Arthur R. .....Pontiac

## OCEANA COUNTY

Day, Clinton .....Hart
Hayton, A. R.....Shelby
Heard, William .....Pentwater
Heysett, N. W.....Hart
Jensen, Viggo .....Shelby
Lemke, Walter M.....Shelby
Munger, L. P.....Hart
Nicholson, John H.....Hart
Reetz, Fred A.....Shelby
Wood, Merle G.....Hart

## O. M. C. O. R. O.

**(Otsego-Montmorency-Crawford-Oscoda-Roscommon-Ogemaw)**

Beeby, R. J.....West Branch
Clippert, C. G.....Grayling
Crandell, C. H.....West Branch
Ford, Ruey O..... Gaylord
Jardine, Hugh.....West Branch
Keyport, C. R.....Grayling
Lee, F. W.....Fairview
Martzowka, M. A.....Roscommon
McDowell, A. S.....West Branch
McDowell, Douglas.....West Branch
McKillop, G. L.....Gaylord
Peckham, Richard .....Gaylord
Rifenberg, F. G.....Gaylord
Stealy, Stanley .....Grayling

## ONTONAGON COUNTY

Bender, Jesse L.....Mass
Evans, Edwin J.....Ontonagon
Hogue, H. B.....Ewen
McHugh, Frank W.....Ontonagon
Strong, W. F.....Ontonagon
Whiteshield, C. F.....Trout Creek

## OTTAWA COUNTY

Beernink, E. H.....Grand Haven
Bloemendaal, D. C.....Zeeland
Bloemendal, W. B.....Grand Haven
Boone, Cornelius E.....Zeeland
Bos, G. D.....Holland
Clark, N. H.....Holland
DeWitt, S. L.....Grand Haven
Harms, H. R.....Holland
House, M. E.....Holland
Huizinga, John G.....Holland
Irvin, H. C.....Holland
Kemme, Gerrit.....Zeeland
Kools, Wm. Clarence.....Holland
Leenhouts, Abraham .....Holland
Lickley, Iva .....Grand Haven
Long, C. E.....Grand Haven
Mulder, C. D.....Spring Lake
Nichols, Rudolph H.....Holland
Presley, Wm. J.....Grand Haven
Stickley, A. E. .....Coopersville
Tappan, W. M.....Holland
Ten Have, Ralph.....Grand Haven
Timmerman, E. C.....Coopersville
Ver Duin, J.....Grand Haven
Van Der Berg, E.....Holland
Van der Velde, O.....Holland
Wells, Kenneth.....Spring Lake
Westrate, William.....Holland
Wiersma, Silas C.....Hudsonville
Winters, John K.....Holland
Winters, Wm. G.....Holland

## SAGINAW COUNTY

Alger, G. L.....Saginaw
Anderson, W. K.....Saginaw
Bagley, U. S.....Saginaw
Bagshaw, David E.....Saginaw
Beckwith, Bertram H.....Saginaw
Bennett, R. B.....St. Charles
Berberovitch, T. F.....Saginaw
Bishop, H. M.....Saginaw
Brender, Fred P.....Frankenmuth
Brock, W. H.....Saginaw
Butler, M. G.....Saginaw
Button, A. C.....Saginaw
Cady, F. J.....Saginaw
Cameron, Allen K.....Saginaw
Campbell, L. A.....Saginaw
Clark, Wilbert B.....Saginaw
Cortopassi, Andre.....Saginaw
Durman, Donald.....Saginaw
Ely, C. W.....Saginaw
English, William F.....Saginaw
Ernst, Arthur Randolph.....Saginaw
Eymer, Esther.....Saginaw
Fleschner, Thomas E.....Birch Run
Freeman, Frederick W.....Saginaw
Galsterer, E. C.....Saginaw
Gay, Harold Howard.....Saginaw
Goman, Louis D.....Saginaw
Grigg, Arthur.....Saginaw
Hart, Virgil C.....Saginaw
Harvie, L. C.....Saginaw
Helmkamp, Herbert O.....Saginaw
Hester, E. G.....Saginaw
Hill, Victor L.....Saginaw
Hohn, F. J.....Saginaw
Hyslop, L. F.....Saginaw
Imerman, Harold M.....Saginaw
Jaenichen, R.....Saginaw
James, J. W.....Saginaw
Jiroch, R. S.....Saginaw
Kahn, Paul .....Frankenmuth
Keller, S. S.....Saginaw
Kemp, J.....Saginaw
Kempton, R. M.....Saginaw
Kirchgeorg, Clemens G....Frankenmuth
Kleekamp, H.....Saginaw
Knott, Harriet A.....Saginaw
Leitch, Arthur E.....Saginaw
Ling, Ernest M.....Hemlock
Lohr, O. W.....Saginaw
Longstreet, Martha L.....Saginaw
Luger, F. E.....Saginaw
MacKinnon, Edwin D.....Saginaw
Markey, Jos. P.....Saginaw
Martzowka, Wm. P.....Saginaw
Maurer, John A.....Saginaw
McClinton, N. F.....Saginaw
McGregor, R.....Saginaw
McKinney, Alex R.....Saginaw
McLandress, Joshua A.....Saginaw
McMeekin, James W.....Saginaw
Meyer, Henry J.....Saginaw
Moon, A. R.....Saginaw
Morris, Keith M.....Saginaw
Morse, W. F.....Saginaw
Mudd, Richard D.....Saginaw
Murphy, Albert P.....Saginaw
Murray, Chas. R.....Saginaw
Novy, F. O.....Saginaw
O'Reilly, Wm. J.....Saginaw
Ostrander, Frank W.....Freeland
Pillsbury, Edward A.....Frankenmuth
Poole, Frank A.....Saginaw
Potvin, Clifford D.....Merrill
Powers, Julius H.....Saginaw
Richter, Emil P. W.....Saginaw
Rosenberg, Robert.....Saginaw
Rubin, H.....Saginaw
Ryan, M. D.....Saginaw
Ryan, R. S.....Saginaw
Sample, Chester H.(Honorary) Saginaw
Sample, J. T.....Saginaw
Schaiberger, Elmer.....Saginaw
Sheldon, S.....Saginaw
Slack, Walter K.....Saginaw
Thomas, Dale.....Saginaw
Tiedke, G. E.....Saginaw
Toshach, C. E.....Saginaw
Wallace, H. C.....Saginaw
Wheeler, Dorothy .....Saginaw
Wilson, Roy H.....Saginaw
Windham, Pearl S.....Saginaw
Wixted, John F.....Chesaning
Wixted, Julia L.....Chesaning
Yntema, S.....Saginaw

## SAINT CLAIR COUNTY

Armsbury, A. B.....Marine City
Atkinson, J. M.....Port Huron
Attridge, J. A.....Port Huron
Battley, J. C. Sinclair.....Port Huron
Borden, C. L.....Yale
Boughner, W. H.....Algonac
Bovee, M. E.....Port Huron
Brush, Howard O.....Port Huron
Burke, Ralph M.....Port Huron
Burley, Jacob H.....Port Huron
Callery, A. L.....Port Huron
Campbell, R. H.....St. Clair
Carney, F. V.....St. Clair
Cooper, T. H.....Port Huron
DeGurse, T. E.....Marine City
Derck, W. P.....Marysville
Engelman, A. A.....St. Clair
Fraser, Robert C.....Port Huron
Heavenrich, Theodore F...Port Huron
Holcomb, R. J.....Marine City
Johnson, Howard R.....Capac
Kesl, Geo. Matthew.....Port Huron
LeGalley, K. B.....Port Huron
Ludwig, F. E.....Port Huron
McCue, Crystal C.....Goodells
MacKenzie, Alexander J....Port Huron
MacPherson, C. A.....St. Clair
Martinson, J. E.....Port Huron
McColl, D. J.....Port Huron
McColl, Neil J.....Port Huron
Meredith, E. W.....Port Huron
Patterson, D. Webster.....Port Huron
Pollack, Donald A.....Yale
Reynolds, Annie E.....Port Huron
Ryerson, W. W.....Port Huron
Schaefer, W. A.....Port Huron
Sites, E. C.....Port Huron
Smith, Reginald.....Port Huron
Thomas, C. F.....Port Huron
Vroman, M. E.....Port Huron
Waltz, J. F.....Capac
Ware, John R.....Port Huron
Wass, Henry C.....St. Clair
Waters, George.....Port Huron
Wellman, Joseph E.....Port Huron
Wight, William G.....Yale
Zemmer, Adrian L.....Port Huron

## SAINT JOSEPH COUNTY

Fiegel, S. A.....Sturgis
Hoekman, Aben.....Constantine
Kane, David M.....Sturgis
Miller, C. G.....Sturgis
O'Dell, J. H.....Three Rivers
Parrish, Marion F.....Sturgis
Pennington, H. C.....White Pigeon
Rice, John W.....Sturgis
Shaw, G. D.....Mendon
Sheldon, J. P.....Sturgis
Slote, L. K.....Constantine
Springer, R. A.....Centerville
Sweetland, G. J.....Constantine
Weir, D. C.....Three Rivers
Wilkerson, Nina C.....Sturgis

## SCHOOLCRAFT COUNTY

Broberg, Gail.....Manistique
Fyvie, James.....Manistique
Michalenko, Edward J.....Manistique
Ross, Donald.....Manistique
Shaw, George A.....Manistique
Tucker, A. R.....Manistique
Goss, Samuel B.....Manistique

## SHIAWASSEE COUNTY

Alexander, Reuben G.....Laingsburg
Arnold, Jr., Alfred L.....Owosso
Arnold, Sr., A. L.....Owosso
Bates, L. F.....Durand
Braunsdorf, R. L.....Owosso
Brown, Richard J.....Owosso
Carney, Edward J.....Durand
Cramer, George G.....Owosso
Crane, C. A.....Corunna
Fillinger, W. B.....Ovid
Greene, I. W.....Owosso
Hartgraves, Hallie.....Frankfort
Haviland, James J.....Owosso
Hume, Arthur M.....Owosso
Hume, Harold A.....Owosso
Linden, V. E.....Durand
McKnight, E. R.....Owosso
Parker, W. T.....Owosso
Pochert, R. C.....Owosso
Richards, C. J.....Durand
Sackrider, Geo. P.....Owosso
Soule, Glenn T.....Henderson
Taylor, W. M.....Ovid
Wade, G. B.....Laingsburg
Ward, Walter E.....Owosso
Watts, Fred A.....Owosso
Weinkauf, W. F.....Corunna
Wilcox, Anna L.....Owosso
Wilcox, C. M.....Owosso

## TUSCOLA COUNTY

Barbour, Harry A.....Mayville
Bates, George.....Kingston
Cook, Raymond.....Akron
Dickerson, W.....Wahjamega
Donahue, Theron.....Cass City
Frankfurth, Vincent T.....
New York, N. Y.
Gugino, Frank James.....Reese
Handy, J. E.....Caro
Hoffman, T. E.....Vassar
Howlett, R. R.....Caro
Johnson, O. G.....Mayville
Kaven, G. H.....Unionville
Kralick, Louise C.....Wahjamega
MacRae, L. D.....Gagetown
Maurer, J. G.....Reese
Meister, Franklin O.....
Minneapolis, Minn.
McCoy, Ira Dean.....Bad Axe
Merrill, Elmer H.....Caro
Morris, Frank L.....Cass City
Petrie, William.....Caro
Preston, Otto.....Wahjamega
Rundell, Annie Stevens.....Vassar
Ruskin, D. B.....Fairgrove
Salot, D. G.....Millington
Savage, Lloyd.....Caro
Spohn, U. G.....Fairgrove
Starmann, Bernard.....Cass City
Swanson, E. C.....Vassar
Vatz, Jack A.....Millington
Von Renner, Otto.....Vassar
Vail, Harry F.....Unionville

## WASHTENAW COUNTY

Alexander, John.....Ann Arbor
Adams, James P.....Ann Arbor
Arner, Fred L.....Ann Arbor
Badgley, Carl.....Ann Arbor
Barker, Paul.....Ann Arbor
Barnwell, John.....Ann Arbor
Barr, A. S.....Ann Arbor
Barss, Harold D.....Ypsilanti
Bartlett, R. M.....Ann Arbor
Bassow, Paul.....Ann Arbor
Bell, Margaret.....Ann Arbor
Belote, G. H.....Ann Arbor
Belser, Walter.....Ann Arbor
Bigelow, Robert Barry...Boston, Mass.
Blair, Thomas.....Ann Arbor
Boys, Floyd.....Ann Arbor
Breakey, James R.....Ypsilanti
Breakey, J. F.....Ann Arbor
Britton, H. B.....Ypsilanti
Brown, Phillip.....Ypsilanti
Brownell, Durwin.....Ann Arbor
Bruce, James D.....Ann Arbor
Buenaventura, Jiminez.....Ann Arbor
Bugher, John C.....Ann Arbor
Camp, Carl Dudley.....Ann Arbor
Clements, Glenn T.....Ann Arbor
Coller, F. A.....Ann Arbor
Combs, Arnold B.....Ann Arbor
Conrad, Jr., George.....Ann Arbor
Cowie, D. M.....Ann Arbor
Cummings, H. H.....Ann Arbor
De Jong, Russell.....Ann Arbor
De Tar, John S.....Milan
Donaldson, S. W.....Ann Arbor
Durfee, M. L.....Ann Arbor
Echols, Dean.....Ann Arbor
Edmunds, Charles W.....Ann Arbor
Emerson, Herbert W.....Ann Arbor
Failing, Joseph H.....Ann Arbor
Field, Jr., Henry.....Ann Arbor
Folsome, Clair Edwin.....Ann Arbor
Forsythe, W. E.....Ann Arbor
Fralick, F. Bruce.....Ann Arbor
Freyberg, Richard H.....Ann Arbor
Frye, Carl H.....Ann Arbor
Furstenberg, Albert C.....Ann Arbor
Ganzhorn, Edwin.....Ann Arbor
Gardiner, Sprague.....Ann Arbor
Gates, John L.....Ann Arbor
Gates, Neil A.....Ann Arbor
Gulde, Andros.....Chelsea
Hannum, M. R.....Milan
Harris, Bradley M.....Ypsilanti
Haynes, Harley A.....Ann Arbor
Himler, Leonard E.....Ann Arbor
Holland, Charles F.....Ann Arbor
Howard, S. C.....Ann Arbor
Inch, George F.....Ypsilanti
Isaacs, Raphael.....Ann Arbor
Johnson, Lester J.....Ann Arbor
Johnson, V. C.....Ann Arbor
Kahn, Edgar A.....Ann Arbor
Kemper, J. W.....Ann Arbor
Kleinschmidt, Earl E.....Ann Arbor
Kleinschmidt, Gladys.....Ann Arbor
Klingman, Theophil.....Ann Arbor
Knoll, Leo.....Ann Arbor
Kretzschmar, Norman.....Ann Arbor
LaFever, Sidney L.....Ann Arbor
Langford, Theron S.....Ann Arbor
Lichty, Dorman E.....Ann Arbor
Lilly, Coral Adelbert.....Ann Arbor
McEachern, Thomas H.....Ann Arbor
Mackenzie, Aileen McQuinn..Ypsilanti
Maddock, Walter G.....Ann Arbor
Malcolm, Karl D.....Ann Arbor
Malcolm, Russell L.....Ann Arbor
Marshall, Don.....Ann Arbor
Marshall, Evelyn W.....Ann Arbor
Marshall, Mark.....Ann Arbor
Maxwell, J. H.....Ann Arbor
Metzger, Ida.....Ann Arbor
Miller, Harold.....Saline
Miller, Norman F.....Ann Arbor
Muehlig, George F.....Ann Arbor
Myers, Dean W.....Ann Arbor
Nesbit, Reed M.....Ann Arbor
Newburgh, L. H.....Ann Arbor
Oliphant, L. W.....Ann Arbor
Paton, Thomas W.....Ypsilanti
Patterson, Ralph M.....Ypsilanti
Peet, Max.....Ann Arbor
Peirce, Carleton B.....Ann Arbor
Pillsbury, Charles B.....Ypsilanti
Pinkus, Herman.....Eloise
Pollard, H. M.....Ann Arbor
Prout, Gordon H. J.....Saline
Raphael, Theophile.....Ann Arbor
Reekie, Richard D.....Ann Arbor
Riecker, H. H.....Ann Arbor
Ross, Howard.....Ann Arbor
Sacks, Wilma.....Ann Arbor
Samson, Paul C.....Ann Arbor
Schnute, Louise F.....Chicago, Ill.
Scott, Wm. A.....New York, N. Y.
Schumacher, W. E.....Ann Arbor
Sheldon, John M.....Ann Arbor
Sink, Emory W.....Ann Arbor
Smalley, Marianna.....Ann Arbor
Smith, N. M.....Ann Arbor
Snow, Glenadine.....Ypsilanti
Solis, Jeanne C.....Ann Arbor
Steele, Jr., John.....Ann Arbor
Steiner, L. G.....Ann Arbor
Stocking, Bruce.....Ann Arbor
Stryker, Homer H.....Ann Arbor
Sturgis, Cyrus C.....Ann Arbor
Sundwall, John.....Ann Arbor
Teed, Reed Wallace.....Ann Arbor
Teitelbaum, Myer.....Ann Arbor
Thieme, M. Thurston.....Ann Arbor
Todd, Oliver E.....Ann Arbor
Towsley, Harry A.....Ann Arbor
Wager, Spencer.....Ann Arbor
Waggoner, R. W.....Ann Arbor
Waldron, Fred R.....Ann Arbor
Wallace, J. B.....Saline
Wanstrom, Ruth.....Ann Arbor
Washburne, Charles L.....Ann Arbor
Weller, C. V.....
Wessinger, J. A.(Honorary) Ann Arbor
Wile, Udo J.....Ann Arbor
Williamson, F. B.....Ypsilanti
Wilson, Frank N.....Ann Arbor
Winslow, Sherwood B.....Ann Arbor
Wisdom, Inez.....Ann Arbor
Worth, M. H.....Ypsilanti
Wright, William J.....Ypsilanti
Wylie, Wm. C.....Dexter
Yoder, O. R.....Ypsilanti

## WAYNE COUNTY

Aaron, Chas. D.....Detroit
Abbott, P. J.....Detroit
Abrams, Harry M.....Detroit
Adams, James R.....Dearborn
Adler, Leopold.....Detroit
Agins, Jack.....Detroit
Agnelly, Edward J.....Detroit
Agnew, George H.....Detroit
Albrecht, H. F.....Detroit
Aldrich, E. Gordon.....Detroit
Alford, E. S.....Detroit
Allen, C. I.....Detroit
Allen, N. M.....Detroit
Allen, Raymond B.....Detroit
Alles, Russell W.....Detroit
Allison, Frank B.....Detroit
Altshuler, Ira M.....Detroit
Altshuler, S. S.....Detroit
Amberg, Emil.....Detroit
Amolsch, Arthur L.....Detroit
Amos, Thomas G.....Detroit
Anderson, Bruce.....Detroit
Andries, Jos. H.....Detroit
Andries, R. C.....Detroit
Ankley, J. W.....Detroit
Anslow, Robert E.....Detroit
Appel, Phillip R.....

Armstrong, A. G.....Detroit
Armstrong, O. S.....Detroit
Arnold, Effie.....Detroit
**Aronstam, Noah E.....Detroit**
Ashe, S. R.....Detroit
Ashley, L. Byron.....Detroit
Ashton, F. B.....Highland Park
Athay, Roland M.....Detroit
August, Harry E.....Detroit
Babcock, Kenneth B.....Detroit
Babcock, Myra.....Detroit
Babcock, W. L.....Detroit
Babcock, Warren W.....Detroit
Bach, Walter F.....Detroit
Bacon, Vinton A.....Detroit
Baer, Raymond B.....Detroit
Bagley, H. E.....Dearborn
**Bailey, C. C.....Detroit**
Bailey, Don A.....Detroit
Bailey, L. J.....Detroit
Baker, Clarence.....Detroit
Baker, Howard B.....Detroit
Bakst, Joseph A.....Detroit
Balaga, Frank T.....Detroit
Balcerski, M. A.....Detroit
Ballard, Chas. S.....Detroit
Balser, C. W.....Detroit
Barker, F. Marion.....Grosse Pointe
Barnett, L. L.....Detroit
Barrett, W. D.....Detroit
Bartemeier, Leo H.....Detroit
Barton, J. R.....Detroit
Baskerville, Robert J.....Wayne
Bates, Gaylord S.....Detroit
Bauer, A. Robert.....Detroit
Bauer, L. E.....Detroit
**Baumann, Walter L.....Detroit**
Baumer, Moe.....Detroit
Baumgarten, E. C.....Detroit
Beach, Watson.....Detroit
Beam, A. Duane.....Detroit
Beaton, Colin.....Detroit
Beatty, S. M.....Detroit
Beaver, Donald C.....Detroit
Beck, Eva F.....Eloise
Becker, Jos. W.....Detroit
Becklein, C. L.....Detroit
Berry, Wm. J.....Detroit
Beeuwkes, L.....Dearborn
Begle, H. L.....Detroit
Behn, Claud W.....Detroit
Belanger, Henry.....River Rouge
Belknap, C. H.....Detroit
Bell, J. Kenner.....Detroit
Bell, John N. (Honorary).....Detroit
Bell, Wm. M.....Detroit
Benjamin, C. C.....Detroit
Bennett, Harry B.....Detroit
Benson, Clifford D.....Detroit
Benson, Davis A.....Detroit
Benson, Roland R.....Detroit
Bentley, Neil.....Detroit
Berent, Morris S.....Detroit
Berge, C. A.....Detroit
Bergo, Howard L.....Detroit
Berke, Sidney S.....Detroit
Berkowitz, Wm. E.....Detroit
Berman, H. S.....Detroit
Berman, Robert.....Detroit
Berman, Sidney.....Detroit
Bernard, Walter G.....Detroit
Bernath, Gerald J.....Detroit
Bernbaum, Bernard.....Detroit
Bernstein, A. E.....Detroit
Berris, J. M.....Detroit
Bertram, B. F.....Detroit
Besancon, John H.....Detroit
**Best, T. H. Edward.....Detroit**
Bevington, H. G.....Detroit
Bicknell, Edgar A.....Detroit
Bicknell, Nathan J.....Detroit
Biddle, A. P. (Honorary).....Detroit
Birch, John R.....Detroit
Birkelo, Carl C.....Detroit
Black, Perry S.....Detroit
Blain, A. W.....Detroit
Blanchard, F. N.....Detroit
Blashill, James R.....Detroit
Bleir, Jos.....Detroit
Bloch, Abraham.....Detroit
Blodgett, W. E.....Detroit
Bloom, Arthur R.....Detroit
Boell, Arthur F.....Detroit
Boland, J. R.....Detroit
Boles, A. E.....Detroit
Bonning, Carl (Honorary).....Detroit
Bostick, Arthur Eleazer.....Detroit
Bovill, Edwin G.....Detroit
Bowman, F. E.....Detroit
Brachman, D. S.....Detroit
Bradshaw, Wm. H.....Detroit
Braley, William N.....Detroit
Bramigk, Fritz W.....Detroit
Branch, Hira E.....Detroit
Brand, Benjamin.....Detroit
Braun, Lionel.....Detroit
Breitenbecher, Edward R.....Detroit
Brennan, Thos. J.....Detroit
**Breon, Guy L.....Detroit**
Brewer, James Ardis.....Detroit
Briegel, Walter A.....Detroit
Brines, O. A.....Detroit
Brisbois, Harold J.....Plymouth
Broderson, Harvey S.....River Rouge
Bromme, Wm.....Detroit
Brooks, A. L.....Detroit
Brooks, C. D.....Detroit
Brosius, William L.....Detroit
Brough, Glen A.....Detroit
Brown, A. O.....Detroit
Brown, Harvey F.....Detroit
Brown, Henry S.....Detroit
Brown, Stanley H.....Detroit
Brownell, Paul G.....Detroit
Brunk, A. S.....Detroit
Brunk, Clifford F.....Detroit
Brunke, Bruno B.....Detroit
Bryce, John D.....Detroit
Buchanan, W. Paul.....Detroit
Buell, Jr., Chas. E.....Detroit
Buesser, F. G.....Detroit
Buller, H. L.....Detroit
Bullock, Earl S.....Detroit
Burgess, Chas. M.....Detroit
Burgess, C. G.....Detroit
Burgess, Jay M.....Detroit
Burgess, Josephus M. (Honorary) Detroit
Burnside, Howard B.....Detroit
Burnstine, Julius Y.....Detroit
Burnstine, Perry P.....Detroit
Burr, Geo. C.....Detroit
Burrows, Howard A.....Dearborn
Burton, D. T.....Detroit
Bush, L. M.....Detroit
Buss, John A.....Detroit
Butler, H. J.....Detroit
Butler, L. H.....Detroit
**Butler, Volney N.....Detroit**
Butterworth, Herman K...Lincoln Park
Buttrum, Edward J.....Detroit
Byington, G. M.....Detroit
Byrd, Cloyd R.....Detroit
Cadieux, Henry W.....Detroit
Caldwell, J. Ewart.....Detroit
Calkins, H. N.....Detroit
Callahan, T. T.....Detroit
Campau, Geo. H.....Detroit
Campbell, Don M.....Detroit
Campbell, Duncan.....Detroit
Campbell, Malcolm D.....Detroit
Campbell, Mary B.....Detroit
Candler, C. L.....Detroit
Canter, Gayle E.....Detroit
Cantor, Meyer O.....Detroit
Caraway, James E.....Wayne
Carey, Cornelius.....Detroit
Carleton, Lawrence H.....Detroit
Carlucci, P. F.....Detroit
Carmichael, E. K.....Detroit
Carpenter, C. J.....Detroit
Carpenter, G. B.....Detroit
Carr, J. G.....Detroit
Carroll, Lona B.....Detroit
Carstens, Henry R.....Detroit
Carter, John M.....Detroit
Carter, L. F.....Detroit
Cassidy, Wm. J.....Detroit
Castrop, C. W.....Detroit
Cathcart, Edward.....Detroit
Catherwood, A. E.....Detroit
Caton, Dorothy Fisher.....Detroit
Caughey, M. D.....Detroit
Cetlinski, C. A.....Hamtramck
Chalat, Jacob H.....Detroit
Chall, Henry G.....Detroit
Chance, J. H.....Detroit
Chapman, A. L.....Detroit
Chapnick, H. A.....Detroit
Chase, Clyde H.....Detroit
Chatel, Arthur N.....Detroit
Chene, G. C.....Detroit
Chenik, Ferdinand.....Detroit
Chester, John L.....Detroit
**Chittenden, G. E.....Detroit**
Chostner, G. C.....Detroit
Christensen, C. A.....Detroit
Christopoulos, D. G.....Detroit
Chrouch, Laurence A.....Detroit
Ciprian, Joseph E.....Detroit
Clark, Ben W.....Detroit
Clark, C. M.....Hamtramck
Clark, David R.....Detroit
Clark, Donald V.....Detroit
Clark, Geo. E.....Detroit
Clark, Harold E.....Detroit
Clark, Harry G.....Detroit
**Clark, Harry L.....Detroit**
Clark, Raymond Lee.....Detroit
Clarke, George L.....Detroit
Clarke, Niles A.....Detroit
Clarke, Norman E.....Detroit
Clifford, Charles H.....Detroit
Clifford, T. P.....Detroit
Clinton, Wm. R.....Detroit
Clippert, Julius C.....Grosse Isle
Coan, Glenn L.....Wyandotte
Coates, Carl Amos.....Detroit
Cobane, John H.....Detroit
Cochrane, Edgar G.....Detroit
Cohn, Daniel E.....Detroit
Cohoe, Don A.....Detroit
Cole, Fred H.....Detroit
Cole, James E.....Detroit
Coleman, Margarete.....Detroit
Coll, Howard R.....Detroit
Collings, M. Raymond.....Detroit
Collins, A. N. (Honorary) Pasadena, Cal.
Collins, Edmund F.....Detroit
Colyer, Raymond G.....Detroit
Condit, L. Irving.....Detroit
Conn, Harold.....Detroit
Connelly, B. L.....Detroit
Connelly, Richard C.....Detroit
Connolly, Frank.....Detroit
Connor, Guy L.....Detroit
Connors, J. J.....Detroit
Conrad, Elmer R.....Detroit
Cooksey, Warren B.....Detroit
Cooley, Thos. B.....Detroit
Coolidge, Maria B..Grosse Pointe Park
Cooper, Edmond.....Detroit
Cooper, James B.....Detroit
Cope, H. E.....Detroit
Corbeille, Catherine.....Detroit
Corbett, John J.....Detroit
Costello, Russell T.....Detroit
Cothran, Robt. M.....Detroit
Cotruro, Louis D.....Detroit
Coughlin, Florence J.....Detroit
Cowan, A. L.....Detroit
Cowan, Wilfred.....Detroit
Cowen, Robt. L.....Detroit
Coxon, A. W.....Detroit
Crane, L. T.....Detroit
Crawford, Albert S.....Detroit
Cree, Walter J. (Honorary)...Detroit
Crews, T. H.....Detroit
Croll, Leo J.....Detroit
Crossen, Henry F.....Detroit
Croushore, James E.....Detroit
Cruikshank, Alex.....Detroit
Cumming, R. E.....Detroit
Curry, Fillmore S.....Detroit
Curtis, Frank E.....Detroit
Dail, O. C.....Detroit
Dana, Harold M.....Detroit
Danforth, J. C.....Detroit
Danforth, Mortimer E.....Detroit
Darling, Milton A.....Detroit
Darpin, Peter H.....Detroit
Davidow, David M.....Detroit
Davidson, Harry O.....Detroit
Davies, Thos. S.....Detroit
Davies, Windsor.....Detroit
Davis, C. R.....Detroit
Davis, Egbert F.....Detroit
Davis, James E.....Detroit
Dawson, F. E.....Detroit
Defnet, W. A.....Detroit
De Horatiis, Jos.....Detroit
Dempster, Jas. H.....Detroit
DeNike, A. James.....Detroit
Denis, George M.....Detroit
DeWaele, Paul L.....Detroit
DeWitt, A. S.....Detroit
Dibble, H. F.....Detroit
Dickson, B. R.....Detroit
Diebel, Nelson W.....Detroit
Diebel, H. H.....Detroit
Dill, Hugh L.....Detroit
Dill, J. Lewis.....Detroit
Dillard, Malcolm P.....Detroit
Dixon, R. S.....Detroit
Dodds, J. C.....Detroit
Dodenhoff, P. C.....Detroit
Dodrill, F. D.....Detroit
Domzalski, C. A.....Detroit
Donald, Douglas.....Detroit
Donald, Wm. M.....Detroit
Donovan, Daniel R.....Detroit
Doty, Arthur G.....Detroit
Doty, Chester A.....Detroit
Doub, Howard P.....Detroit
Douglas, Bruce H.....Detroit

Douglas, C. L.....Detroit
Dovitz, B. W.....Detroit
Dowdle, Edward.....Detroit
Dowling, Harvey E.....Detroit
Dowling, Pearl Christie.....Detroit
Downer, Ira G.....Detroit
Doyle, George H.....Detroit
Drake, J. J.....Detroit
Drescher, George A.....Detroit
Drinkaus, Harold Irving.....Detroit
Drolshagen, E. A.....Detroit
Droock, V.....Detroit
Droste, Arnold T.....Detroit
Drummond, Donald L.....Detroit
Dubin, Joseph James.....Dearborn
Dubnove, Aaron.....Detroit
DuBois, Paul W.....Detroit
Dubpernell, Karl.....Detroit
Dubpernell, Martin S.....Detroit
Dundas, Edward M.....Detroit
Dunlap, Henry A.....Detroit
Dunn, C. E.....Detroit
Durocher, E. J.....Ecorse
Durham, Robert H.....Detroit
Dutchess, Chas. E.....Detroit
Dysarz, T. T.....Detroit
Dziuba, John F.....Detroit
Eades, Chas. C.....Detroit
Eakins, Frederick J.....Detroit
Eaton, Crosby D.....Detroit
Eder, Joseph R.....Detroit
Eder, Samuel J.....Detroit
Edgar, Russell G.....Detroit
Eisman, C. H.....Detroit
Ellis, Seth W.....Detroit
Elvidge, R. J.....Detroit
Ely, Lloyd L.....Detroit
Emmert, H. C.....Detroit
Engel, Earl H.....Wyandotte
Engel, John B.....Detroit
Ensign, Dwight C.....Detroit
Ensing, Osborn.....Detroit
Epstein, S. G.....Detroit
Erickson, Milton H.....Eloise
Erkfitz, A. W.....Detroit
Erman, Joseph M.....Detroit
Eschbach, Jos. Wm.....Detroit
Estabrook, B. U.....Detroit
Ettinger, Clayton J.....Detroit
Evans, Wm. A.....Detroit
Falk, Ira E.....Detroit
Farbman, A. A.....Detroit
Farbman, Simon S.....Detroit
Fauman, David H.....Detroit
Fay, Geo. E.....Detroit
Felcyn, Geo. W.....Detroit
Feldstein, Martin Z.....Detroit
Fellers, R. L.....Detroit
Fenton, E. H.....Detroit
Fenton, Russell F.....Detroit
Fenton, S. C.....Detroit
Ferguson, Thos. W.....Detroit
Fettig, Carl A.....Detroit
Field, G. S.....Detroit
Fischer, Frederick J.....Detroit
Fisher, O. O.....Detroit
Fisher, Ralph L.....Detroit
Fitzgerald, E. W.....Detroit
Flaherty, Norman W.....Detroit
Flaherty, S. A.....Detroit
Flower, J. A.....Detroit
Foley, Hugh S.....Dearborn
Font, A. J.....Detroit
Foote, James A.....Lincoln Park
Forbes, E. B.....Detroit
Ford, Frances A.....Detroit
Ford, G. A.....Detroit
Ford, Sylvester.....Detroit
Ford, Walter D.....Detroit
Forrester, Alex. V.....Detroit
Foster, Daniel P.....Detroit
Foster, Linus J.....Detroit
Foster, Owen C.....Detroit
Foster, Wm. L.....Detroit
Foster, W. M.....Detroit
Fowler, Wm.....Detroit
Frank, M. N.....Detroit
Frazer, Mary Margaret.....Detroit
Freeman, Mable.....Northville
Freeman, Thelma.....Detroit
Freedman, John.....Detroit
Freese, John A.....Detroit
Fremont, J. Courtney.....Detroit
Freund, H. A.....Detroit
Friedlaender, Alex. S.....Detroit
Friedlaender, B.....Detroit
Frothingham, G. E.....Detroit
Gabe, Sigmund.....Detroit
Gaberman, David B.....Detroit
Galantowicz, H. C.....Detroit
Galdonyi, L.....Detroit
Galerneau, D. B.....Van Dyke
Gannan, Arthur M.....Detroit
Garbutt, V. L.....Detroit
Gariepy, Louis J.....Detroit
Garner, H. B.....Detroit
Garrett, Evan.....Detroit
Gaston, Herbert B.....Detroit
Gehrke, A. E.....Detroit
Geib, L. O.....Detroit
Geiter, Clyde Wm.....Detroit
Gelber, Samuel.....Detroit
Gellert, I. S.....Detroit
Gemeroy, J. C.....Detroit
George, A. W.....Detroit
Gerondale, Elmond J.....Detroit
Gibson, J. C.....Detroit
Gigante, Nicola.....Detroit
Gignac, A. L.....Detroit
Gillman, Robt. W.....Detroit
Gittins, Perry.....Detroit
Glasgow, Gordon K.....Detroit
Glassman, Samuel.....Detroit
Glazer, Walter S.....Detroit
Gleason, J. E.....Detroit
Glees, John L.....Detroit
Glick, M. J.....Detroit
Glowacki, B. F.....Detroit
Gmeiner, Clarence C.....Detroit
Goerke, Elmer A.....Romulus
Goetz, Angus G.....Detroit
Goldberg, Arthur.....Detroit
Goldberg, Harry H.....Detroit
Goldberg, Nathan H.....Detroit
Goldin, M. I.....Detroit
Gonne, Wm. S.....Detroit
Goodrich, Benjamin E.....Detroit
Gordon, Douglas.....Detroit
Gordon, J. Whitlock.....Detroit
Gordon, Wm. H.....Detroit
Gorelick, Harry S.....Detroit
Gorning, R. P.....Detroit
Gould, S. E.....Detroit
Goux, R. S.....Detroit
Grace, Jos. M.....Eloise
Graff, J. M.....Detroit
Graham, Julius A.....Detroit
Grain, G. O.....Detroit
Grajewski, Leo J.....Detroit
Grandfield, F. J.....New Boston
Grant, Heman E.....Detroit
Gratton, H. L.....Detroit
Green, Lewis.....Detroit
Green, Louis M.....Detroit
Greenidge, Robert.....Detroit
Greenwood, J. H.....Detroit
Greiner, Bert A.....Detroit
Grekin, Joseph.....Detroit
Grekin, Samuel L.....Detroit
Griffith, Arthur J.....Detroit
Grimaldi, Gregory J.....Detroit
Grob, Otto.....Detroit
Gronow, A. A.....Detroit
Grossman, S. C.....Detroit
Gruber, T. K.....Eloise
Guimaraes, A. S.....Dearborn
Gurdjian, E. S.....Detroit
Hackett, Andrew R.....Detroit
Hackett, Walter L.....Detroit
Hackett, W. A. (Honorary).....Detroit
Haig, D. B.....Detroit
Hale, A. S.....Detroit
Hall, Arche C.....Detroit
Hall, E. Walter.....Detroit
Hall, Robt. J.....Detroit
Haluska, J. A.....Detroit
H'Amada, Norman K.....Detroit
Hamburger, A. C.....Detroit
Hamilton, William.....Detroit
Hamilton, Wm. F.....Detroit
Hammer, Chas. A.....Detroit
Hammer, Edwin J.....Detroit
Hammond, A. E.....Detroit
Hammond, H. J.....Detroit
Hammond, James L.....Detroit
Hand, F. V.....Detroit
Hanna, Carl.....Detroit
Hanna, E. Howard.....Detroit
Hanna, Samuel C.....Detroit
Hanna, Thos. P.....Detroit
Hansen, Frederick E.....Detroit
Hardy, G. C.....Detroit
Harm, W. B.....Detroit
Harper, J. T.....Detroit
Harrell, Voss.....Detroit
Harris, Earl R.....Detroit
Harris, Harold H.....Detroit
Harrison, Henry.....Detroit
Harrison, Hugh.....Detroit
Harrison, Hugh Wesley.....Detroit
Hart, T. M.....Detroit
Hartman, Frank W.....Detroit
Hartz, H. J. (Honorary).....Detroit
Hartzell, John B.....Detroit
Hasley, Clyde K.....Detroit
Hastings, Orville J.....Detroit
Hauser, John E.....Detroit
Havers, Howard.....Detroit
Hawken, William C.....Detroit
Hawkins, Jas. W.....Detroit
Hayes, Jos. David.....Detroit
Heath, Parker.....Detroit
Heavener, L. E.....Detroit
Hedrick, D. W.....Detroit
Heldt, Thos. J.....Detroit
Hendelman, Manuel H.....Detroit
Henderson, Harold.....Detroit
Henderson, L. T.....Detroit
Henderson, Wm. E.....Detroit
Heenan, Theophilus H.....Detroit
Henrich, L. E.....Detroit
Henry, Thos. J.....Detroit
Herkimer, Dan R.....Lincoln Park
Herrold, Rose E.....Detroit
Hershey, Lynn N.....Detroit
Hewitt, Herbert W.....Detroit
Hewitt, Robert S.....Dearborn
Heyner, Stanley A.....Detroit
Hier, Edward A.....Detroit
Higbee, Arthur L.....Detroit
Hileman, Lee.....Ecorse
Hipp, Wm.....Detroit
Hirschman, L. J.....Detroit
Hockman, Morton M.....Detroit
Hodge, J. B.....Detroit
Hodoski, Frank J.....Detroit
Hoff, E. C.....Detroit
Hoffman, E. S.....Detroit
Hoffmann, Martin H.....Eloise
Holcomb, August A.....Northville
Hollander, A. J.....Detroit
Holmes, Alfred W.....Detroit
Holt, Henry T.....Detroit
Honhart, Fred L.....Detroit
Honor, Wm. H.....Wyandotte
Hookey, J. A.....Detroit
Hooper, Vernon J.....Detroit
Hoops, George B.....Detroit
Hopkins, J. E.....Detroit
Horan, Thomas.....Detroit
Horton, Reece H.....Detroit
Horwitz, John B.....Detroit
Host, Lawrence H.....Detroit
House, Fred Chandler.....Detroit
Howard, Austin Z.....Detroit
Howard, Philip J.....Detroit
Howell, Robert.....Eloise
Howes, Willard B.....Detroit
Hromadki, Louis.....Detroit
Hubbard, Arthur G.....Detroit
Hubbard, John P.....Detroit
Hudson, A. Willis.....Detroit
Hudson, J. Stewart.....
Grosse Pointe Village
Hudson, Wm. A.....Detroit
Huegli, Albert G.....Detroit
Huegli, Wilfred Albert.....Detroit
Huff, Reginald G.....Detroit
Hughes, Ray W.....Detroit
Hull, Leroy W.....Detroit
Hulse, Warren L.....Detroit
Humber, A. Milton (Honorary).....
Detroit
Hunt, T. H.....Detroit
Hunt, Verne G.....Detroit
Hunter, Basil H.....Detroit
Hunter, Elmer N.....Detroit
Husband, C. W.....Detroit
Hyde, F. W.....Detroit
Hyde, G. Warren.....Detroit
Insley, Stanley W.....Detroit
Irwin, Wm. A.....Detroit
Isaacson, Arthur.....Detroit
Isaacs, Joseph C.....Detroit
Isbey, E. K.....Detroit
Ivkovich, Peter.....Detroit
Jacob, John C.....Detroit
Jacoby, Myron D.....Detroit
Jaeger, J. P.....Detroit
Jaeger, Grove A.....Detroit
Jaekel, C. N.....Detroit
Jaffar, Donald J.....Detroit
Jaffe, Julius L.....Detroit
Jaffe, Louis.....Detroit
Jahsman, W. E.....Detroit
Jamieson, Robt. C.....Detroit
Jarre, Hans A.....Detroit
Jarzembowski, Francis Bernard.....Detroit
Jarzynka, Frank J.....Detroit
Jend, W. J.....Detroit
Jenne, Byron H.....Detroit
Jennings, Alpheus F.....Detroit
Jentgen, C. J.....Detroit
Jentgen, L. G.....Detroit
Jocz, M. W.....Detroit
Jocz, T. Rosenbusch.....Detroit

Jodar, E. O.....Detroit
John, Hubert R.....Detroit
Johnson, Hubert H. (Honorary).Detroit
Johnson, Ralph A.....Detroit
Johnson, Ralph K.....Detroit
Johnson, V. P.....Detroit
Johnson, W. H. M.....Detroit
Johnston, Charles G.....Detroit
Johnston, Everett V.....Detroit
Johnston, J. A.....Detroit
Johnston, John L.....Detroit
Johnston, Wm. E.....Detroit
Johnstone, B. I.....Detroit
Joinville, E. V.....Detroit
Jones, Adrian R.....Detroit
Jones, Arthur J.....Detroit
Jones, Horace C.....Detroit
Joyce, Stanley J.....Detroit
Judd, C. H.....Detroit
Kahn, W. W.....Detroit
Kallet, H. I.....Detroit
Kallman, David.....Detroit
Kallman, R. Robert.....Detroit
Kamin, L. E.....Detroit
Kaminski, Ladislaus R.....Detroit
Kaminski, Zeno L.....Detroit
Kamperman, Geo.....Detroit
Kapetansky, A. J.....Detroit
Kapetansky, Nathan J.....Detroit
Karr, Herbert S.....Detroit
Kasper, Joseph A.....Detroit
Kass, J. B.....Detroit
Kates, Simon C.....Detroit
Katzman, I. S.....Detroit
Keane, W. E.....Detroit
Keating, Thos. F.....Detroit
Kehoe, Henry J.....East Detroit
Kellogg, Bessie A.....Detroit
Kelly, Edward W.....Detroit
Kelly, F. A.....Detroit
Kemler, W. J.....Ecorse
Kennary, James M.....Detroit
Kennedy, Chas. S.....Detroit
Kennedy, Lester F.....Detroit
Kennedy, Robt. B.....Detroit
Kennedy, Wm. Y.....Detroit
Kenning, John C.....Detroit
Kernick, Melvin O.....Detroit
Kern, Wheeler H.....Garden City
Kernkamp, Ralph.....Detroit
Kersten, A. G.....Detroit
Kersten, Werner.....Detroit
Keshishian, S. K.....Detroit
Kibsey, Ambrose T.....Detroit
Kidner, F. C.....Detroit
Kilroy, Frank.....Detroit
Kimball, David Charles.....Detroit
King, Edward D.....Detroit
King, Melbourne J.....Detroit
Kingswood, Roy C.....Detroit
Kirker, J. G.....Detroit
Kirchner, Augustus.....Detroit
Kirschbaum, Harry M.....Detroit
Klebba, Paul A.....Detroit
Klein, Louis.....Nutley, N. J.
Klein, Wm.....Detroit
Kleinman, S.....Detroit
Kliger, David.....Detroit
Kline, Starr Lewis.....Detroit
Kloeppel, C. S.....Detroit
Klote, M. D.....Detroit
Koss, Frank R.....Detroit
Knaggs, C. W.....Detroit
Knight, S. H.....Detroit
Knobloch, Edmund J.....Detroit
Knox, Ross. M.....Ecorse
Koch, John C.....Detroit
Koebel, R. H.....Detroit
Koessler, G. L.....Detroit
Kohn, A. Max.....Detroit
Kohn, M. E.....Detroit
Kolasa, William B.....Detroit
Kovach, Emery P.....Detroit
Kovan, Dennis D.....Detroit
Kraft, Raymond B.....Detroit
Kreutz, George C.....Detroit
Krieg, E. G.....Detroit
Kritchman, M. J.....Detroit
Krynicki, F. X.....Detroit
Kubanek, Joseph L.....Detroit
Kullman, Harold J.....Detroit
Kurcz, J. A.....Detroit
Laberge, A. T.....Detroit
La Bine, Alfred C.....Detroit
La Ferte, A. D.....Detroit
Laird, R. Lee.....Detroit
Lakoff, Chas.....Detroit
La Marche, N. O.....Detroit
Lambert, Alvin Gerald.....Detroit
Lamley, Geo. H.....Detroit
Lammy, James V.....Detroit
Lampman, Harold Heath.....Detroit
Lance, Paul E.....Detroit
Landers, M. B.....Detroit
Landers, M. B., Jr.....Detroit
Lang, L. W.....Detroit
Lange, Anthony H.....Detroit
Lange, Wm. A.....Detroit
Laning, G. M.....Detroit
Larson, John A.....Detroit
Larsson, B. H.....Detroit
Laub, Stanley V.....Detroit
Lauppe, Edward H.....Detroit
Lauppe, Frederick A.....Detroit
Law, John Harvey.....Eloise
Lawrence, Wm. C.....Detroit
Lawson, John W.....Detroit
Leach, David.....Detroit
Leacock, R. C.....Detroit
Leader, Luther R.....Detroit
Leaver, L. Ross.....Detroit
Leckie, Geo. C.....Detroit
Ledwidge, P. L.....Detroit
Lee, John.....Detroit
Leibinger, H. R.....Detroit
Leipsitz, Louis S.....Detroit
Lemley, Clark.....Detroit
Lemmon, Charles E.....Detroit
Lemmon, C. W.....River Rouge
Lenhard, C. A.....Detroit
Lenz, Willard R.....Detroit
Lepard, C. W.....Detroit
Lepley, F. O.....Detroit
Lescoheir, Alexander W.....
Grosse Pointe Park
L'Esperance, S. P.....Detroit
Leucutia, Traian.....Detroit
Levin, David M.....Detroit
Levin, Samuel J.....Detroit
Levy, David J.....Detroit
Lewis, J. Hugh.....Wyandotte
Lewis, L. A.....Detroit
Libbrecht, Robert Victor.....Detroit
Lieberman, B. L.....Detroit
Lignell, Rudolph W.....Detroit
Lilly, Chas. J.....Detroit
Lilly, Vernon S.....Detroit
Lipkin, Ezra.....Detroit
Lippold, Paul H.....Detroit
Lipschutz, Louis S.....Detroit
Lipton, Harry R.....Detroit
Litzenburger, A. F.....Detroit
Livingston, G. M.....Detroit
Lockwood, Bruce C.....Detroit
Loeffler, Arthur J.....Lincoln Park
Long, E. C.....Detroit
Loranger, C. B.....Detroit
Lorentzen, Edwin H.....Detroit
Lovas, Wm. S.....Detroit
Lowenstine, Adolf W.....Detroit
Lowrie, G. B.....Detroit
Lowrie, Jr., William L.....Detroit
Luce, H. A.....Detroit
Lutz, Earl F.....Detroit
Lynn, David H.....Detroit
Mabley, J. Donald.....Detroit
MacArthur, Robert A.....Detroit
MacCracken, Frances L.....Detroit
MacCracker, Walter H.....Detroit
MacDonell, Frank J.....Detroit
MacFarlane, Howard W.....Detroit
MacGregor, William W.....Detroit
Mack, Harold C.....Detroit
MacKenzie, Earl D.....Detroit
MacKenzie, Frank M.....Detroit
MacKenzie, John W.....Detroit
MacKenzie, R. D.....Detroit
Mackersie, Wm. G.....Detroit
MacMillan, Francis B.....Detroit
MacMillan, Jas. A.....Detroit
MacMullen, Frank B.....Detroit
MacQueen, Malcom D.....Detroit
Maguire, Clarence E.....Detroit
Mair, Harold U.....Detroit
Maire, E. D.....Detroit
Malachowski, Bronislaus T.....Detroit
Mallory, Norman A.....Detroit
Mancuso, Vincent S.....Detroit
Marcotte, Oliver.....Detroit
Marcus, Daniel B.....Detroit
Marinus, C. J.....Detroit
Markel, Joseph M.....Detroit
Markoe, R. C. L.....Detroit
Maroney, John Walker.....Detroit
Marshall, James Ross.....Detroit
Martin, E. G.....Detroit
Martin, Elbert A.....Detroit
Martin, I. Herbert.....Detroit
Martin, L. R.....Detroit
Martin, R. M.....Detroit
Martin, W. C.....Detroit
Martin, Wm. Harper.....Detroit
Martinez, Pedro O.....Detroit
Martmer, Edgar.....Detroit
Marwil, T. B.....Detroit
Mason, Robert J.....Detroit
Mateer, John G.....Detroit
Matthews, J. D.....Detroit
Matthews, Wallace R.....Dearborn
May, Earl W.....Detroit
May, Jr., Frederick T.....Detroit
Mayer, E. V.....Detroit
Mayer, W. L.....Detroit
Mayer, Willard D.....Detroit
McAlpine, Archibald D.....Detroit
McAlpine, Gordon S.....Detroit
McBryde, Lyman M.....Detroit
McCausland, M. B.....Detroit
McClellan, G. L.....Detroit
McClellan, R. J.....Detroit
McClendon, James J.....Detroit
McClintock, J. J.....Detroit
McClure, Roy D.....Detroit
McClure, Wm. R.....Detroit
McClurg, D.....Detroit
McColl, Kenneth M.....Detroit
McCollum, Estel B.....Detroit
McCord, Carey P.....Detroit
McCormick, C. C.....Dearborn
McCormick, Crawford W.....Detroit
McCullough, Lester E.....Detroit
McDonald, Allan W.....Detroit
McDonald, Angus L.....Detroit
McDonald, George O.....Detroit
McFayden, Hugh A.....Detroit
McGarvah, A. W.....Detroit
McGarvah, Joseph A.....Detroit
McGillicuddy, W. E.....Detroit
McGinnis, Daniel H.....Detroit
McGraw, Arthur B.....
Grosse Pointe Village
McIntosh, W. V.....Detroit
McKean, G. Thomas.....Detroit
McKean, Richard M.....Detroit
McKinnon, Wm. R.....Detroit
McLane, Harriet E.....Detroit
McLean, Angus (Emeritus).....Detroit
McLean, Don W.....Detroit
McMehen, Chas. E.....Detroit
McPhail, Malcolm.....Detroit
McPherson, R. J.....Detroit
McQuiggan, Mark R.....Detroit
McQuiggan, Paul.....Detroit
McRae, Donald.....Detroit
Meader, Fred M.....Detroit
Meek, Stuart F.....Detroit
Meinecke, H. A.....Detroit
Mellen, Hyman S.....Detroit
Menaugh, Frank R.....Detroit
Mendelssohn, R. J.....Detroit
Mercer, R. E.....Detroit
Merkel, Chas.....Grosse Pointe Village
Merrill, Charles H.....Detroit
Merrill, Lionel N.....Detroit
Merrill, W. O.....Detroit
Merritt, E. D.....Detroit
Merritt, Earl G.....Detroit
Metzger, Harry C.....Detroit
Meyers, M. P.....Detroit
Meyers, Solomon G.....Detroit
Miley, H. H.....Detroit
Miller, H. L.....Detroit
Miller, Myron H.....Detroit
Miller, M. P.....Trenton
Miller, T. H.....Detroit
Mills, Clinton C.....Detroit
Miner, Stanley G.....Detroit
Minor, E. G.....Detroit
Miral, Solomon P.....Detroit
Mishelevich, Sophie.....Detroit
Mitchell, C. Leslie.....Detroit
Mitchell, W. Bede.....Detroit
Moehlig, Robert C.....Detroit
Moisides, V. P.....Detroit
Moll, Clarence D.....Detroit
Moloney, J. Clark.....Detroit
Mond, Edward.....Detroit
Monfort, Willard.....Detroit
Montgomery, John C.....Detroit
Morand, Louis J.....Detroit
Morgan, Richard H.....Detroit
Moritz, H. C.....Detroit
Morley, James A.....Detroit
Morris, H. L.....Detroit
Morse, Plinn F.....Detroit
Morse, Ellen.....Detroit
Morton, David G.....Detroit
Morton, John B.....Detroit
Mosen, Max M.....Detroit
Moss, Ervin B.....Detroit
Mott, Carlin P.....Detroit
Muellenhagen, W. J.....Detroit
Munro, Fred Wm.....Detroit
Munson, F. T.....Detroit
Muntyan, Andrew.....Detroit
Murphy, Frank J.....Detroit

Murphy, John M.....Detroit
Murphy, Scipio G.....Detroit
Murray, Geo. M.....Detroit
Musser, Fred C.....Detroit
Myers, Gordon.....Detroit
Myers, G. P.....Detroit
Nagle, J. W.....Wyandotte
Naud, Henry J.....Detroit
Naylor, A. E.....Detroit
Naylor, Arthur H.....Detroit
Neary, John H.....Detroit
Needles, R. J.....Detroit
Neff, I. H.....Detroit
Nelson, Harry M.....Detroit
Nelson, Victor E.....Detroit
Neumann, Arthur J.....Detroit
Newbarr, A. A.....Detroit
Newman, Max Karl.....Detroit
Nill, Wm. F.....Detroit
Nittis, Saras.....Detroit
Nolting, Wilfred S.....Detroit
Norconk, Alonzo A.....Detroit
Northcross, Daisey L.....Detroit
Northrop, Arthur K.....Detroit
Norton, Chas. S.....Detroit
Novy, R. L.....Detroit
Nowicki, Jos. A.....Detroit
O'Brien, E. J.....Detroit
O'Donnell, David H.....Detroit
O'Donnell, Dayton H.....Detroit
O'Donnell, Wm. S.....Detroit
Ohmart, G. B.....Detroit
O'Hora, James T.....Detroit
Olmsted, Wm. R.....Detroit
Olney, H. E.....Detroit
Olsen, A. E.....Detroit
Oppenheim, Joseph M.....Detroit
Opperman, Rudolph.....Detroit
Orecklin, Leo.....Detroit
Organ, Fred W.....Detroit
Ormond, John K.....Detroit
O'Rourke, R. M.....Detroit
Osius, Eugene A.....Detroit
Owen, Clarence I.....Detroit
Owen, Robert G.....Detroit
Owen, Samuel H. C.....Detroit

Palmer, Hayden.....Detroit
Palmer, R. Johnston.....Detroit
Palmerlee, G. H.....Detroit
Pangburn, L. E.....Detroit
Panzner, Ed. J.....Detroit
Parker, Albert R.....Wayne
Parker, Benj.....Detroit
Parker, W. R.....Detroit
Parmeter, Rolland.....Detroit
Parr, R. W.....Detroit
Parsons, John P.....Detroit
Pawlowski, Jerome.....Detroit
Paysner, H. A.....Detroit
Peabody, C. W.....Detroit
Peacock, Lee W.....Detroit
Pearman, Chas. Leon.....Eloise
Pearse, Harry A.....Detroit
Peirce, Howard W.....Detroit
Penberthy, G. C.....Detroit
Pequegnot, C. F.....Detroit
Perdue, Grace M.....Detroit
Perkin, Frank S.....Detroit
Perkins, Ralph A.....Detroit
Perlis, H. L.....Detroit
Pfeiffer, Rudolph L.....Detroit
Phillips, Fred W.....River Rouge
Pickard, Orlando W.....Detroit
Pierce, Frank L.....Detroit
Pierson, Merle.....Detroit
Pietraszewski, Alex W.....Detroit
Pinckard, Karl G.....Dearborn
Pinney, L. J.....Detroit
Pino, Ralph H.....Detroit
Piper, C. C.....Detroit
Piper, Ralph R.....Detroit
Pittman, J. E.....Detroit
Plaggemeyer, H. W.....Detroit
Pliskow, Harold.....Detroit
Podezwa, J. W.....Detroit
Pollack, John Jay.....Detroit
Poole, M. W.....Detroit
Poos, Edgar E.....Detroit
Porretta, F. S.....Detroit
Porter, H. J.....Romulus
Potter, L. S.....Detroit
Potts, Enos Aitken.....Detroit
Pratt, J. P.....Detroit
Pratt, Lawrence.....Detroit
Priborsky, B. H.....Detroit
Price, Alvin E.....Detroit
Price, A. H.....Detroit
Ptolemy, H. H.....Detroit
Purcell, Frank H.....Detroit
Quennell, Willard L.....Detroit
Quirk, Edmund J.....Detroit

Raiford, Frank P.....Detroit
Rand, Morris .....Detroit
Randolph, Wilson.....Detroit
Ray, C. Burton.....Detroit
Raynor, Harold F.....Detroit
Reberdy, G. J.....Detroit
Reed, H. W.....Detroit
Reed, Ivor E.....Detroit
Rees, H. C.....Detroit
Reid, W. G.....Detroit
Reinsh, Ernest R.....Detroit
Renaud, Geo. L.....Detroit
Rennell, Leo.....Detroit
Renz, R. H.....Detroit
Repp, W. A.....Detroit
Reveno, Wm. S.....Detroit
Reye, H. A.....Detroit
Reynolds, Lawrence.....Detroit
Reynolds, R. P.....Detroit
Reyner, C. E.....Detroit
Rezanka, Harold J.....Detroit
Rhoades, F. P.....Detroit
Rice, Harold B.....Detroit
Rice, M. .....Detroit
Richards, R. M.....Detroit
Richardson, Allan L.....Detroit
Ridge, Ralph W.....Wyandotte
Ridley, Edward R.....Detroit
Rieckhoff, Geo. G.....Detroit
Rieger, John B.....Detroit
Rieger, Mary H.....Detroit
Riseborough, E. C.....Detroit
Rizzo, Frank .....Detroit
Robb, Edward L.....Detroit
Robb, Herbert F.....Detroit
Robb, J. M.....Grosse Pointe
Robbins, Edward R.....Detroit
Roberts, A. J.....Ecorse
Robertson, A. E.....Detroit
Robertson, Stanley B.....Detroit
Robertson, Tom H.....Detroit
Robillard, Henry Jos.....Detroit
Robinson, G. W.....Detroit
Robinson, Harold A.....Detroit
Robinson, Martin B.....Detroit
Robinson, Wm. H.....Detroit
Rogers, James Dudley.....Wyandotte
Rogin, James R.....Detroit
Rogoff, Abraham S.....Detroit
Rohde, Paul C.....Detroit
Roney, Eugene H.....Detroit
Root, Chas. T.....Strongs
Rosbolt, Oscar P.....Detroit
Rosen, Robert .....Detroit
Rosenman, J. D.....Detroit
Rosenzweig, Saul .....Detroit
Rosenzweig, Aron .....Detroit
Ross, Donald G.....Detroit
Roth, Theo. I.....Detroit
Rothbart, Harold B.....Detroit
Rothman, Emil D.....Detroit
Rubright, LeRoy W.....Detroit
Rueger, Ralph .....Detroit
Rupp, J. R.....Detroit
Ruskin, Samuel H.....Detroit
Russell, John C.....Detroit
Ryan, Chas. F.....Detroit
Ryan, Mark .....Detroit
Ryan, Wm. D.....Detroit
Rydewski, J. B.....Detroit
Ryerson, Frank L.....Detroit

Sachs, Herman Karl.....Detroit
Sack, Anthony G.....Detroit
Sa'di, Lutfi M.....Detroit
Sadowski, Roman J.....Detroit
Sage, E. O.....Detroit
Sager, E. L.....Detroit
St. Armour, H. J.....Detroit
St. Louis, R. J.....Detroit
Salchow, Paul T.....Detroit
Salowich, John N.....Detroit
Saltzstein, Harry.....Detroit
Sander, I. W.....Detroit
Sanders, Alex W.....Detroit
Sanderson, Alvord R.....Detroit
Sanderson, Herman H.....Detroit
Sanderson, J. H.....Detroit
Sanderson, Stevens S.....Detroit
Sanderson, Suzanne.....Detroit
Sands, G. E.....Detroit
Sandweiss, David J.....Detroit
Sawyer, Harold F.....Detroit
Scarney, H. D.....Detroit
Schaefer, R. L.....Detroit
Schenden, A. J.....Melvindale
Schembeck, I. S.....Detroit
Schinagel, Geza.....Detroit
Schlafer, N. H.....Detroit
Schlacht, George F.....Romulus
Schmidt, M. R.....Trenton
Schmitt, Norman L.....Detroit
Schneck, Robert J.....Detroit
Schneider, Curt P.....Detroit
Schoenfield, G. D.....Detroit
Schooten, Sarah S.....Detroit
Schorr, Robt. L.....Detroit
Schreiber, Frederic.....Detroit
Schulte, C. H.....Detroit
Schultz, Ernest C.....Detroit
Schwartz, H. Allen.....Detroit
Schwartz, Louis Adrian.....Detroit
Scott, James W.....Detroit
Scott, Robert J.....Detroit
Scott, Wm. J.....Detroit
Scruton, Foster D.....Detroit
Seabury, Frank P.....Detroit
Seeley, James B.....Dearborn
Seeley, Ward F.....Detroit
Segar, Lawrence F.....Detroit
Seibert, Alvin H.....Detroit
Seiferlein, Archibald L.....Detroit
Sellers, Graham.....Detroit
Seliady, Jos. E.....Northville
Selling, Lowell S.....Detroit
Sewell, George.....Detroit
Seymour, W. J.....Detroit
Shafarman, Eugene M.....Detroit
Shaffer, Loren W.....Detroit
Shafter, Royce R.....Detroit
Shankwiler, R. A.....Detroit
Sharrer, Chas. H.....Detroit
Shaw, Robert G.....Detroit
Shawan, H. K.....Detroit
Shebesta, Bessey H.....Detroit
Shebesta, Emil M.....Detroit
Sheldon, J. A.....Detroit
Shelton, Carl F.....Detroit
Sheridan, Chas. R.....Detroit
Sherman, Boudana.....Detroit
Sherman, W. Larue.....Detroit
Sherein, Edgar R.....Detroit
Sherwood, D. L.....Detroit
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Shipton, W. Harvey.....Detroit
Shlain, Benj.....Detroit
Shore, O. J.....Detroit
Shotwell, Carlos W.....Detroit
Shrom, Howard K.....Detroit
Shurly, B. R.....Detroit
Siddall, Roger S.....Detroit
Siefert, John L.....Detroit
Sill, Henry W.....Detroit
Silvarman, I. Z.....Detroit
Silverman, M. M.....Detroit
Silver, M. D.....Detroit
Simpson, C. E.....Detroit
Simpson, H. L.....Detroit
Sippola, George W.....Detroit
Skinner, W. Clare.....Detroit
Skolnick, Max H.....Detroit
Skrzycki, Stephen S.....Detroit
Sladen, Frank J.....Detroit
Slate, Raymond N.....Detroit
Slaugenhaupt, J. G.....Detroit
Slevin, John G.....Detroit
Smeltzer, Merrill.....Detroit
Smeck, A. R.....Detroit
Smith, Chas. E.....Detroit
Smith, Clarence V.....Detroit
Smith, F. Janney.....Detroit
Smith, Gerritt C.....Detroit
Smith, Henry L.....Detroit
Smith, L. Lloyd.....Detroit
Snow, L. W.....Northville
Socall, Chas. J.....Detroit
Somers, Donald C.....Detroit
Sonda, L. P.....Detroit
Sorock, Emil M.....Detroit
Southwick, S. W.....Detroit

Spademan, Loren C.....Detroit
Spalding, Edward D.....Detroit
Sparks, J. H.....Detroit
Sparling, Harold I.....Northville
Spencer, Frank.....Detroit
Sperry, Frederick L.....Detroit
Spiro, Adopf.....Detroit
Spitzley, Wm. A.....Detroit
Springborn, Benj. R.....Detroit
Sprunk, J. P.....Detroit
Spurrier, Ethelbert.....Detroit
Squires, W. H.....Detroit
Stafford, Claude M.....Detroit
Stafford, Frank W. J.....Detroit
Stageman, J. C.....Detroit
Stalker, Hugh.....Grosse Pointe
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Stone, Elizabeth A.....Detroit
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Strickland, C. C.....Detroit
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Stubbs, Harold W.....Detroit
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Szappanyos, Bela T.....Detroit
Szlachetke, Vincent E.....Detroit

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Tapert, R. T.....Detroit
Tassie, Ralph N.....Detroit
Tatelis, Gabriel.....Detroit
Taylor, Nelson M.....Detroit
Taylor, R. S.....Detroit
Tear, Malcolm J.....Detroit
Texter, Elmer C.....Detroit
Thomas, Delma F.....Detroit
Thomas, Fred W.....Detroit
Thompson, Jas. B.....Detroit
Thompson, W. A.....Detroit
Thomson, Alexander .....Detroit
Thorpe, Francis A.....Detroit
Thosteson, George C.....Detroit
Thuner, A. (Emeritus).....
Point Loma, Calif.
Tichenor, E. D.....Detroit
Toepel, O. T.....Detroit
Tomsu, Charles L.....Detroit
Top, Franklin H.....Detroit
Torrey, H. N.....Detroit
Townsend, Frank M.....Detroit
Trask, H. D.....Detroit
Troester, George A.....Detroit
Trombley, Bryan.....Detroit
Trombley, Jr., Joseph J.....Detroit
Troxell, E. C.....Detroit
Tryon, Mary.....Detroit
Tufford, Norman G.....Detroit
Tupper, Roy D.....Redford
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Van Heldorf, Harry.....Detroit
Van Nest, A. E.....Detroit
Van Rhee, Geo.....Detroit
Vardon, Edward M.....Detroit
Vasu, V. O.....Detroit
Vernier, J. A.....Detroit
Vincent, J. Le Roi..... Wayne
Voegelin, Adolph E.....Detroit
Vogel, Hyman A.....Detroit
Voelkner, Geo. H.....Detroit
Vokes, Milton D.....Detroit
Von Berg, Johannes.....Detroit
Von Der Heide, Elmore C.....Detroit
Voorheis, Wilbur J.....Detroit
Vossler, A. E.....Detroit
Vreeland, C. E.....Detroit

Waddington, Jos. E. G.....Detroit
Waggener, C. Stanley.....Detroit
Wainger, Max J.....Detroit
Waldbott, Geo. L.....Detroit
Walker, Roger V.....Detroit
Wallace, S. Willard.....Detroit
Walls, Arch.....Detroit
Walser, Howard C.....Detroit
Walsh, Chas. R.....Detroit
Walters, Albert G.....Detroit
Wander, Wm. G.....Detroit
Ward, William K.....Detroit
Warner, P. L.....Detroit
Warren, Wadsworth.....Detroit
Watkins, J. T.....Detroit
Watson, J. Edwin.....Detroit
Watson, Robert W.....Detroit
Watts, J. J.....Detroit
Wax, John H.....Detroit
Wayne, Morris A.....Detroit
Weaver, Clarence E.....Detroit
Weber, Karl W.....Detroit
Wehenkel, Albert M.....Detroit
Weiner, Maurice Bernard.....Detroit
Weingarden, David H.....Detroit
Weisberg, A. Allen.....Detroit
Weiser, Frank A.....Detroit
Weisberg, Jacob.....Detroit
Weiss, Joseph G.....Detroit
Welch, John H.....Detroit
Weller, Chas. N.....Detroit
Weltman, Carl.....Detroit
Wendel, Jacob S.....Detroit
West, Howard Gaige.....Detroit
Weyher, R. F.....Detroit
White, Milo R.....Detroit
Whitehead, L. S.....Detroit
Whitney, E. L.....Detroit
Wiant, R. E.....Detroit
Wickham, A. B.....Detroit
Wight, Fred B.....Detroit
Wilcox, Leslie F.....Detroit
Wilkinson, Arthur P.....Detroit
Williams, Clarence J.....Detroit
Williams, Mildred C.....Detroit
Wills, J. N.....Detroit
Willson, Wesley W.....Detroit
Wilson, F. S.....Detroit
Wilson, G. A.....Detroit
Wilson, M. C.....Detroit
Wilson, Stuart.....Detroit
Wilson, Walter J.....Detroit
Wilson, Jr., Walter J.....Detroit
Winsor, Carlton Webb.....Detroit
Wishropp, Edward A.....Detroit
Wissman, H. C.....Detroit
Wittenberg, Arthur A.....Detroit
Wittenberg, S. S.....Detroit
Witter, Frank C.....Detroit
Witter, Joseph A.....Detroit
Witus, M.....Detroit
Witwer, Eldwin Roy.....Detroit
Wollenberg, Robert C.....Detroit
Woods, H. B.....Detroit
Woodry, Norman L.....Detroit
Woods, W. E.....Detroit
Woodworth, Wm. P.....Detroit
Wreggitt, Winston R.....Detroit
Wright, C. C.....Detroit
Wruble, Joseph.....Detroit
Wygant, Thelma M.....Detroit

Yates, H. W.....Detroit
Yoakam, W. A.....Detroit
Yott, William J.....Detroit
Young, Don A.....Detroit
Young, Donald C.....Detroit
Young, James P.....Detroit
Young, L. B.....Detroit
Young, Viola M.....Detroit

Zbudowski, Alexander.....Detroit
Zimmer, L. L.....Detroit
Zimmerman, R. L.....Detroit
Zinn, George H.....Detroit
Zolliker, C. R.....Detroit

## WEXFORD COUNTY

Albi, R. W.....Lake City
Brooks, G. W.....Tustin
Buster, H. C.....Baldwin
Carrow, J. F.....Marion
Gruber, John F.....Cadillac
Hager, Ralph.....Manton
Hendricks, H. V.....Kalkaska
Holm, Augustus.....Leroy
Holm, Benton A.....Cadillac
Hoverter, J. W.....Evart
Laughbaum, T. R.....Lake City
McCall, J. H.....Lake City
McManus, Edwin.....Mesick
Mills, Robert E.....Boon
Moore, S. C.....Cadillac
Moore, G. P.....Cadillac
Murphy, Michael R.....Cadillac
Purdy, Calvin S.....Buckley
Showalter, Laurence E.....Cadillac
Smith, Wallace J.....Cadillac
Wood, G. H.....Luther

# THE JOURNAL

OF THE

*Michigan State Medical Society*

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MAY, 1937


*"Every man owes some of his time to the upbuilding of the profession to which he belongs."*

—THEODORE ROOSEVELT.

## EDITORIAL

### SOCIALISTIC TREND IN LEGISLATION

WE HAVE before us a copy of the Senate Bill 855 introduced by Senator Capper and referred to the financial committee. The bill provides for a state system of health insurance and a fund for its maintenance "equal to at least six per cent of the total of all wages periodically paid by employers to employees." Those eligible for this state health insurance are employees under sixty-five years of age, whose wages are sixty dollars a week or less. There is a provision for those who do not come within the compulsory health insurance law to secure the same services voluntarily, somewhat on the basis of regular health insurance, inasmuch as those outside the scope of the insurance law may obtain all its so-called benefits by acceptance through satisfactory health examination; or, we presume rejection will result if the health examination is not satisfactory.

The Senate Bill 855 makes provision for "fixing the manner of remunerating physicians and dentists in general practice, surgeons and other medical and dental specialists, pharmacists, nurses, hospitals, clinics, laboratories and other persons and agencies furnishing medical benefits." To quote further: "Any one of the following modes may be adopted for remunerating physicians and dentists in general practice—(1) a salary system; (2) a per capita system whereunder payment will be based on the number of persons entitled to medical benefits included in the practitioner's list; (3) a fee system whereunder payment will be based on the extent and character of the treatment given and services rendered by the practitioner to persons entitled to medical benefits; and (4) any combination or modification of the systems hereinabove stipulated."

The bill goes into particulars, as is necessary with all proposed legislation. The chief points of interest, however, are that its scope includes a very large part of the population for whom the state would not concern itself with such basic necessities as shelter, clothes, food and fuel; that it makes provision for voluntary participation in the benefits of the law to those whose incomes are more than sixty dollars a week and who are over sixty-five years of age, by submitting to a physical examination. And it furthermore places doctors and others concerned in medical care on a controlled schedule as regards remuneration.

Whatever may be the outcome of this particular bill, it behooves every member of the medical profession to be alive to the type of legislation which is being proposed to control his professional career. Socialism does not imply freedom. It means a class or group whose duty it is to plan and make rules and a much larger group who must obey; or as Walter Lipmann has very aptly expresseed it, "There must be a hierarchy of officers, or, if you like, officials and a rank and file of privates. The officers must command. The privates must obey. In place of argument, persuasion, bargaining and compromise among individuals, there must be orders and the disciplined acceptance of those orders."

## MEMBERSHIP OF THE MICHIGAN STATE MEDICAL SOCIETY

ELSEWHERE in this number of the JOURNAL appears the membership list of the Michigan State Medical Society. A perusal of this roster will reveal the names of those who are members of the various county medical societies and the Michigan State Medical Society. There are many eligible physicians whose names are not in these columns. They are probably waiting for an invitation. This is the first time in the history of the Michigan State Medical Society that the entire membership list has been published. It is hoped that all eligible physicians not now members of their various county societies will seek active membership so that their names and addresses may be included in the next (perhaps yearly) revision of the list of members.

There are many reasons why every practicing physician should be a member of his county society. The social and intellectual contact with fellow members of the profession has a salutary influence on all. There is no standing still in medicine. One either retrogresses, when what medical training he ever had fades with the years, or he progresses. In a sentence, the membership in the medical society means live, progressive practice of medicine.

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## BASIC SCIENCE BILL

AS THIS is being written, the Basic Science Bill has been passed by the House and is now before the Senate.

There probably has never been any measure of any kind proposed and submitted for the consideration of any legislature in the English speaking world which is so free from valid objections. This statement is made having in mind not the viewpoint of the medical profession or of sectarian healers; the viewpoint is that of the thoughtful layman not connected directly with any of the healing professions. It is meritorious in every way, if for no other reason than it assures the person who may become a patient that the practitioner he calls in has met certain requirements in those studies which are the foundation of all medical and therapeutic knowledge.

It is fair because it interferes with the so-called vested rights of no doctor, osteopath or chiropractor, or any one else now engaged in the care of the sick. It is fair also because it does not discriminate. No candidate for the Basic Science Certificate is required to make known what school of healing he purposes afterwards to attend. Its passing would be a fair measure on the part of the state which for over thirty-eight years has insisted on certain standards in medicine in its two institutions, the medical schools of the University of Michigan and Wayne University. It is only fair that all candidates should be required to meet at least the basic standards that the state has already demanded of those who look forward to medicine.

Every thoughtful layman who has taken pains to acquaint himself with the details of the Basic Science Bill has pronounced it a truly excellent measure.

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## OCCUPATIONAL DISEASE

IN THE April number of this JOURNAL appeared in full the programs of two very important conferences which dealt with the general subject of Occupational Disease. In view of the tendency of legislation to include occupational disease in the same category as accidents acquired by working men in pursuit of their occupation, the subject is one that should concern every member of the medical profession, even though he may not be directly employed by industry. For instance, there is not much difference between industrial accident surgery and accident surgery in which industries are not concerned. This fact makes the scientific discussions, which took place at the recent conference, of interest to the profession at large.

Occupational disease has been defined as "A disease peculiar to the occupation in which the employee was engaged and due to causes in excess of ordinary hazards of employment as such."* No doubt, the passage of an occupational disease bill will evoke decisions from the Michigan courts; this may be anticipated. In the event of the Occupational Disease Law, it may be some time before a legal definition will fix the exact status of diseases acquired in each

*Court Decision on Public Health, Pub. Health Rep. 51:1506, (Oct. 30) 1936. Quoted by the *Journal of the American Medical Association*, March 20, 1937.

peculiar occupation. We are not, however, concerned immediately with the legal phases of the subject. Parenthetically, however, the drafting of an occupational disease bill should be accomplished only with the advice and direction of the medical profession. The scientific and clinical aspects, however, are of paramount importance.

## QUOT HOMINES TOT SENTENTIÆ

A YEAR and a half ago the American Foundation undertook to get an expression of opinion from the doctors themselves on the medical situation in the United States. Six letters were written to 2,500 physicians and surgeons in actual practice, and teaching and other salaried positions. The original letter of inquiry was sent to men of more than twenty years' experience. The letter asked for an informal and confidential reply, which replies have been kept confidential so far as not connecting the writer's name with the opinion or view expressed.

The result is a two-volume report of nearly 1,500 pages in which extracts from the thousands of letters received are arranged according to the subjects and opinions expressed. The title of the two-volume report is *American Medicine, Expert Testimony Out of Court.* The original letter read in part as follows: "We are not presenting to you any formal inquiries or any 'questionnaire' since we somewhat distrust the usefulness of such a method." What was asked was the writer's view based on his experience, of any essential changes needed in the present organization of medical services.

The very latitude of the subject has lead to all sorts of replies. Evidently according to many of the writers, something is wrong, we had almost said, with everything except his own part in the scheme of things. In many of the replies, it is almost a case of washing professional linen in public. The appendix lists the names and professional background of each, but as mentioned there is no clue as to the identity of the writer with the particular opinion quoted.

While opposing state medicine, many favor the socializing of diagnostic aids to medicine, the x-ray and clinical laboratory. State medicine, so-called, has its advocates. The subject of specialization comes in for censure. The consensus is against the poorly or inadequately trained self-styled specialist. Opinions are expressed against the alleged practice of fee splitting and the subterfuges to conceal it. State medicine and health insurance are discussed at great length; also the questions, "Are there too many doctors? Should the number of graduates from medical colleges be limited?" The cost of hospital care also comes in for criticism. Going over the contents of these volumes, it is difficult to discover any omissions in the discussion of anything that has to do with the care of the sick in its broad aspects.

The grouping of opinions and prefaced introductions by the compiler are particularly unbiased and all inclusive. Every conceivable view, pro and con, is expressed. Truly is the physician an individualist—*many men of many opinions.*

## OOT INTIL THE COUNTRY

Oh, it's oot intil th' country where th' cherry blossoms grow,
An' th' wee lambs hae their frolic on th' meadow by th' sea,
Where th' buttercups an' daisies bloom alang th' heather row
An' we hear th' chirp o' robins an' th' hummin' o' th' bee,
An' th' whinny o' th' colties as they're rinnin' to an' fro,
Alang side o' their mithers that's sae happy an' sae free,
An' where lily ponds are bloomin', soft an' white as driven snow,
Oh, it's oot intil th' country, I am langin' for tae be.

Oh, it's oot intil th' country where th' windin' rivers flow,
Where we smell th' clover blossoms an' th' scent of new-mown hay,
Where th' corn is green an' wavin' in th' breezes as they blow,
Where th' apple orchard's shady for th' bairnies as they play,
An' th' windmill, auld an' creaky, fills th' waterin' trough below
Wi' a cool an' sparklin' nectar frae th' rock below th' clay,
An' th' sunshine shines in splendor an' th' earth is a' aglow,
Oh, it's oot intil th' country that I'd like tae be th' day.

WEELUM.

### Less Worry

"To what do you attribute your remarkable health?"

"Well," replied the very old gentleman, "I reckon I got a good start on most people by bein' born before germs were discovered, thereby havin' less to worry about."—*Exchange.*

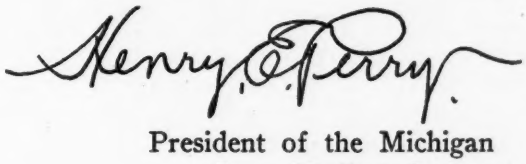
# President's Page

## OCCUPATIONAL DISEASE LEGISLATION

THE State Legislature is still grinding out a few new laws and amending and repealing old ones.

To date, there have been three bills introduced which cover the subject of occupational diseases. House Bill No. 63 is an all-inclusive bill. Senate Bill 106, an all-inclusive bill when it started on its journey in the Senate, finally reached the House as a schedule-type bill listing 31 diseases. House Bill 192 was drafted by a Commission appointed by Governor Frank Fitzgerald, and favored by Governor Frank Murphy in his inaugural address. This bill includes the following diseases: anthrax; asbestosis; bone felon; bursitis; cataract in glass workers; chrome ulceration; compressed air illness; destruction of tissue by radium or x-ray; epitheliomatous cancer or ulceration of skin or cornea; glanders; infection from blisters; inflammation of skin or eyes due to oils, etc.; silicosis; tuleremia; poisoning by any of the following: arsenic, benzol, carbon bisulphite, carbon monoxide, halogenated hydro-carbons, lead, manganese dioxide, mercury, menthol, methyl-chloride, naphtha, nickel carbanyl, phosphorus.

The Michigan State Medical Society is watching this proposed legislation very carefully as the subject has important medical implications, both immediate and in the future. The Advisory Committee on Occupational Diseases of the Michigan State Medical Society has offered its help and technical advice to the House Labor Committee. The State Society will do all in its power to aid the passage of an Occupational Disease Bill which will be fair and impartial to all groups concerned. Individual physicians are urged to contact the House Labor Committee and urge its favorable consideration of an Occupational Disease Bill which will list those diseases to which a Michigan working-man or woman is subject.



President of the Michigan
State Medical Society

# DEPARTMENT OF SOCIETY ACTIVITY

L. FERNALD FOSTER, M.D., Secretary

## THE STATE SOCIETY

THE Michigan State Medical Society exists only in so far as the individual practitioner exists. Too often we think of the State Society as a separate and distinct entity from its component county units and their individual members. For plans and projects of the State Society to be successful there must be activity and interest in these endeavors manifested by each of its nearly four thousand members. During this year we recognize unusual activity sponsored by the State Medical Society. We have experienced an unusual legislative program; we have seen widespread committee activities—activities in the socio-economic endeavors and activities along the lines of scientific medical advancement.

When we take an inventory of these activities what will it disclose? It will disclose successful achievement only if and when each physician has assumed his individual responsibility. The aggregate of these assumed responsibilities will be your State Society's results.

Your committees and officers are constantly evolving plans and programs for the benefit of every physician in Michigan. These individuals need your counsel and advice, they need your constructive criticisms and they need your earnest and sincere coöperative effort if the traditions of the medical profession are to be maintained and if the ever-increasing socio-economic problems of organized medicine are to be solved wisely.

The State Society is YOU and each of your four thousand colleagues. The call to you individually is for wise counsel, tolerant consideration and active execution.

L. FERNALD FOSTER, M.D.,
*Secretary.*

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## MINUTES OF MEETING OF EXECUTIVE COMMITTEE OF THE COUNCIL

**March 17, 1937**

1. *Roll Call.*—The meeting was called to order by Dr. P. R. Urmston, Chairman, of Bay City, in the City Club, Lansing, at 3:20 p. m. Those present included: Dr. Urmston, Bay City; Dr. Henry R. Carstens, Detroit; Dr. A. S. Brunk, Detroit; Dr. T. F. Heavenrich, Port Huron; Dr. I. W. Greene, Owosso. Also present: Dr. Henry E. Perry, Newberry, President of the M.S.M.S.; Dr. Henry Cook, Flint; Dr. James H. Dempster, Detroit; Dr. L. Fernald Foster, Bay City; Executive Secretary Wm. J. Burns. Absent: Dr. F. E. Reeder, Flint (ill).

2. *Minutes.*—The minutes of the meeting of the Executive Committee of February 8 were approved as printed, and distributed to the members.

3. *Financial Report.*—The financial report for the month of February covering the condition of the M.S.M.S. and THE JOURNAL was presented. Bills payable for the month were presented, and on motion of Drs. Carstens-Heavenrich approved and ordered paid.

4. *Report of Legislative Committee.*—This report was presented by Chairman L. G. Christian, and included a résumé of activities to date on the Occupational Disease Bill, the Welfare and Relief Bills, and the Basic Science Bill.

5. *Report of Syphilis Control Committee.*—This report from Chairman Loren W. Shaffer, was read and discussed. Motion of Drs. Carstens-Brunk that the Secretary confer with Health Commissioner Slemons and with Dr. Shaffer regarding the Michigan Program for Syphilis Control, after which they are to confer with Dr. Thomas Parran of the U. S. Public Health Service, advising him that the Michigan State Medical Society is ready to proceed with the Michigan Program for Syphilis Control. Carried unanimously.

6. *Fee Schedules A, B, C, D.*—Report was given on the meeting of the M.S.M.S.—M.H.A.—M.A.R. Committee with the Finance Committee of the State Administrative Board in Lansing on March 9. The Executive Secretary was instructed to ascertain from the Crippled Children Commission what appropriations were desired by the Commission for the next biennial period, and to advise Dr. Grover C. Penberthy, Dr. H. H. Cummings, Dr. E. R. Witwer and his Committee, and Dr. Henry Cook.

7. *Allied Health Council.*—A report on the two meetings of Dr. R. G. Tuck and members of the allied groups (physicians, dentists, nurses, pharmacists and funeral directors) was given, and progress was reported.

8. *Capper Bill.*—A letter from the Bureau of Legal Medicine of the American Medical Association was read, relative to the Capper Bill in the United States Congress.

9. *Relief and Welfare Legislation.*—A progress report was given on the medical phases of relief and welfare legislation, and Senate Bills 111-112 were discussed. Motion of Drs. Brunk-Carstens that the amendment as proposed to Senate Bill 111-112 be given approval, was unanimously carried. Motion of Drs. Greene-Brunk that the Michigan State Medical Society respectfully request Governor Murphy to appoint a physician to the Welfare Commission when that Commission is to be formed after passing of the welfare bills. Motion carried unanimously.

10. *Model Constitution for County Medical Societies.*—This Model Constitution and By-Laws as drafted by Dr. George McL. Waldie's committee, was presented, and on motion of Drs. Brunk-Greene was referred to Secretary Foster and Chairman of the Council Urmston for study. Copies of the pro-

posed Constitution and By-Laws will be sent to all members of the Executive Committee.

11. *Appropriations for Cancer Committee.*—A letter from Dr. O. A. Brines, Chairman of the Cancer Committee, was read, asking for an increase of appropriation from $200 to $275, to pay for printing of cancer publication. The matter was discussed by Dr. H. R. Carstens, Chairman of the Finance Committee. Motion of Drs. Heavenrich-Brunk that the appropriation of the Cancer Committee be increased to $275 for 1937. Carried unanimously.

12. *County Medical Society Coöperation with Probate Court.*—A letter from Mr. K. B. Read of the Medical Service Bureau of the Wayne County Medical Society, was read, in which it was recommended that the county medical society be a filter committee for all afflicted and crippled children and afflicted adults going to the Probate Court. Motion of Drs. Carstens-Brunk that this matter be referred to the Economics Committee, with the recommendation that it investigate the matter and report to Executive Committee. Carried unanimously.

13. *Externes at Jackson Prison Hospital.*—The Secretary reported on responses from the Deans of the two medical schools of Michigan, to the effect that externes could be supplied during the summer holiday. Dr. Foster was requested to refer this report to Dr. David P. Philips of the Parole Commission at Jackson Prison.

14. *(a) Publicity for Postgraduate Courses.*—Dr. J. D. Bruce's letter regarding possible publicity to members of the Michigan State Medical Society regarding postgraduate courses was presented. Motion of Drs. Carstens-Brunk that postal cards be sent to all members of the Michigan State Medical Society, containing Dr. Bruce's suggestions, to notify them of the forthcoming postgraduate courses; this expense is to be charged to the postgraduate budget. Carried unanimously.

*(b)* A letter from Dr. M. R. Kinde of the Kellogg Foundation was read by Dr. Foster, and referred to the Postgraduate Committee.

15. *Upper Peninsula Medical Society Meeting.*—Dr. Cook presented the matter of representatives of the Michigan State Medical Society attending the U. P. Medical Society Meeting next August in Houghton. Motion of Drs. Carstens-Heavenrich that the President, President-Elect, the Chairman of the Council, the Secretary, and the Executive Secretary be authorized to attend this meeting. Carried unanimously.

16. *State Health Department Budget.*—The matter of the Tuberculosis Budget of $125,000 for the state (excluding Detroit), and the other items in the budget of the Health Department was discussed by the Executive Committee. Motion of Drs. Carstens-Brunk that this matter be referred to the Legislative Committee. Carried unanimously.

17. *Adjournment.*—The meeting was adjourned at 5:40 p. m. The Chair thanked all for their attendance and good advice.

## COUNCIL AND COMMITTEE MEETINGS

1. *March 30, 1937*—Legislative Committee—Olds Hotel, Lansing—6:00 P.M.
2. *April 12, 1937*—Legislative Committee—Olds Hotel, Lansing—6:30 P.M.
3. *April 14, 1937*—Joint Meeting of Fee Schedule Committee of M.S.M.S.—M.H.A.—M.A.R. with Finance Committee of State Administrative Board—State Capitol—Lansing—2:00 P.M.
4. *April 22, 1937*—Executive Committee of The Council—Olds Hotel, Lansing—6:00 P.M.

# COUNTY SOCIETIES

## CALHOUN COUNTY

WILFRID HAUGHEY, M.D.
*Secretary*

The March meeting of the Calhoun County Medical Society was called to order at the Athelstan Club at 8:00 p. m. Tuesday, March 2, 1937, by President Brainard.

The minutes of the last meeting were approved as printed in the Bulletin.

The secretary read a communication from the State Society regarding basic science laws, group hospital association laws and the recent meeting of the county secretaries' association, the work of the Public Relations Committee, and the Preventive Medicine Committee.

Dr. Kinde reported on a meeting recently held by himself with the health office, Dr. A. A. Hoyt, the president, Dr. Brainard, and the president of the Battle Creek Academy of Medicine and Dentistry, Dr. Dugan, and others, relative to an immunization program to be carried out by the doctors in coöperation with the health unit and health officials. Details will be sent the members by letter soon.

Dr. Kenneth Lowe reported for the Radio Committee. The programs are being given and will continue to a total of about 18. The radio station say they would be glad to give us the time on account of the nature of the programs, but cannot. However, Dr. Lowe suggested a dollar contribution from each one would take care of the whole matter, which is a favorable rate when you consider their charge is $25 for 15 minutes. A similar arrangement can be made for next year.

Dr. George W. Slagle was asked to introduce the speaker. Dr. Slagle did so stating that this research was the result of a grant from Mr. Kettering, of General Motors.

Dr. H. Worley Kendell of Miami Valley Hospital, Dayton, Ohio, showed four reels of films, giving the history and development of Heat Therapy, demonstrating treatments, and showing patients before and after.

The meeting adjourned. Attendance at dinner, forty-three; at meeting, sixty-two.

## EATON COUNTY

THOMAS WILENSKY, M.D.
*Secretary*

The regular monthly meeting of the Eaton County Medical Society was held at the Carne's Tavern, Charlotte, on the evening of Thursday, March 25. Following dinner, the meeting was immediately turned over to the speaker, Dr. Walter L. Finton, of Jackson, Michigan, who discussed in masterful fashion, "The Diagnosis and Treatment of Diseases of the Gall Bladder." The speaker dwelt significantly on the differential diagnosis of diseases of the gall bladder and stated that many cases went undiagnosed for long periods of time. Medical management, said Dr. Finton, should be exhibited in every non-calculous case skillfully and thoroughly. Where there are gallstones provoking symptoms, and in the absence of contra-indications, surgery should be unreservedly advised. Cholecystectomy in the non-calculous case, is attended by poor results in a very large percentage of patients,

whereas, the same procedure is rewarded with a very satisfactory outcome in the very great majority of stone cases. Dr. Finton emphasized the point that gallbladder surgery is more than an exercise in manual dexterity and, that the surgeon for pre and postoperative care is a vital consideration in diseases of the liver.

A knowledge of the newer discoveries pertaining to the physiology of the biliary tract, pancreas and upper reaches of the alimentary canal is of tremendous value in assessing the patient's complaints and the significance of the gross pathology as viewed through the abdominal section. The speaker stressed the importance of a thorough grounding in the anatomy of this region for the reason that anomalous developments are encountered here much more frequently than in any other part of the body, and occasionally are productive of disastrous developments.

At the conclusion of this more informative discussion Dr. Finton showed three reels of moving pictures taken by him during several expeditions into the Alaskan wilds, often called the scenic paradise of the continent. The reels were beautiful in the extreme, and particularly those that were in color. They amply refuted Dr. Finton's claims to amateurish standing. The doctors in the audience were unusually enthusiastic over the pictures and many questions were asked of Dr. Finton. One of the audience even went so far as to question the speaker concerning the expenses of such a trip. The answer very quickly cooled his yearnings "toward the land of glaciers" and the playground of the world's largest carnivorous animals, the great grizzly and kodiak bears.

At the short business session which followed, Dr. Paine, formerly of Grand Ledge and a former member of the Eaton County Medical Society, was in accordance with his applications unanimously voted back into the fold as he will shortly take up practice in Grand Ledge again.

## GENESEE COUNTY

C. W. Colwell, M.D.
*Secretary*

The Genesee County Medical Society met at Hurley Hospital on April 7, 1937.

The meeting was called to order by the president, Dr. Alvin Thompson. Minutes of the last meeting were read and approved.

Some communications were read by the secretary and particular attention was urged by the president to one from the State Secretary concerning the Basic Science Bill which is to be taken up by the Legislature within the next few days.

An interesting talk was given by Mr. Elroy S. Guckert on "Health Surveys in Flint." After a considerable amount of discussion, it was moved by Dr. Miner that the Genesee County Medical Society go on record as being whole-heartedly behind this Health program and pledge our support to our now existing committee.

Meeting adjourned.

## JACKSON COUNTY

H. W. Porter, M.D.
*Secretary*

The regular monthly meeting of the Jackson County Medical Society was held in the Georgian Room of the Hotel Hayes on Tuesday, March 16, preceded by a dinner at 6:30 p. m. The meeting was called to order by the president, Dr. Crowley, and the minutes of the previous meeting were approved as published in the Bulletin. The name of Dr. R. D. Quillen of Chelsea was presented for membership in this society, action to be taken by the general membership at the next meeting.

The meeting was then turned over to Dr. George Hardie, chairman of the evening, who introduced the speaker, Dr. Harry L. Huber, Associate Professor of Medicine at the University of Chicago. Dr. Huber's hobby happens to be allergy and he chose this as his subject. Some very fine slides were shown of the grasses and weeds that produce allergic symptoms and also of patients suffering from various forms of irritation. The talk was rather long but nobody seemed to mind and one could hardly be expected to give any decent amount of information to an interested audience on such a large subject in a short time. The meeting was opened for questions from the floor, discussions and comments. After these had been taken care of by the speaker the meeting adjourned.

## MUSKEGON COUNTY

L. E. Holly, M.D.
*Secretary*

The regular monthly meeting of the Muskegon County Medical Society was held at the Century Club, Friday evening, February 26. Dinner was served at 6:00 p. m. The meeting was called to order by Dr. C. D. Mandeville, president.

The application for membership of Dr. Enid Fillingham, which was approved by the Executive Committee, was submitted for ballot. Dr. Fillingham was unanimously elected to membership in the Muskegon County Medical Society.

The speaker of the evening, Dr. Cubbins, Professor of Surgery at Northwestern University, was introduced by Dr. H. B. Loughery. Dr. Cubbins spoke on "Fractures of the Neck of the Femur."

An excellent movie, in colors, showing the operative technic was demonstrated by Dr. Cubbins. His film shows excellent photographic detail and is of distinct value in demonstrating his method of treatment. A very frank discussion with many questions and answers followed this most instructive and interesting talk.

Forty-eight members attended. The following guests were present: Doctors Yo, Luten and McWilliams, St. Johns; Stryker, Fremont; Moore, Newaygo.

The meeting adjourned at 10:00 p. m.

## NORTHERN MICHIGAN

Gilbert B. Saltonstall, M.D.
*Secretary*

The regular monthly meeting of the Northern Michigan Medical Society was called to order by President Christie at the Hotel Perry, Petoskey, Thursday evening, March 11, 1937. Ten members were present.

The program for the evening was arranged by Dr. Frank and was presented by Drs. Engle and Lashmet. The subject was "Pneumothorax Treatment of Pulmonary Tuberculosis." Dr. Engle presented the case history of a patient with active tuberculosis who was treated by Pneumothorax for five years with cure. Dr. Lashmet then demonstrated the x-ray findings on this and other patients through their period of treatment and gave

a very interesting discussion of the benefits and complications of Pneumothorax treatment.

The minutes of the February meeting were read and approved. Correspondence received was read and placed on file. The Society went on record as being in favor of free choice of physicians by Welfare and Relief patients. Each member present agreed to write to Representatives Walsh and Faircloth asking their support of the Basic Science Bill. The subject of reorganization of the Ladies' Auxiliary was brought up as old business and tabled for the present. Dr. Mayne was placed in charge of the program for the April meeting.

## SAINT CLAIR COUNTY

GEORGE M. KESL, M.D.
*Secretary*

A regular meeting of Saint Clair County Medical Society was held at the Concord Club, Mt. Clemens, Michigan, as guests of Macomb County Medical Society, Tuesday, April 6, 1937. Twelve members made the trip to Mt. Clemens and about twenty-five members of Mt. Clemens and Macomb County profession were present. Dr. Henry E. Perry, president; Dr. L. Fernald Foster, secretary; and Wm. J. Burns, executive secretary of the State Society, were present and made short addresses. A splendid dinner was served after which Dr. William S. Reveno of Detroit read a paper on the Medical Treatment of Hyperthyroidism which was well prepared and of value to those present. After the conclusion of Dr. Reveno's address a very scientific and timely paper illustrated by lantern slides was given by the Bacteriologist and Pathologist at St. Joseph's Hospital, Mt. Clemens, on the subject of escaping flatus from the lower intestinal tract. This very interesting and amusing theme brought forth gales of laughter from those present.

* * *

A regular meeting of Saint Clair County Medical Society was held at Harrington Hotel, Port Huron, Michigan, Tuesday, April 20, 1937. President Brush was in the chair. Announcement of a meeting of the Nurses' Alumni Association of Port Huron Hospital at Grace Church House, Wednesday, April 21, 1937, was made by Dr. Brush. Miss Harriet Bard was to present a review of "An American Doctor's Odyssey" at that time. The members of the profession were cordially invited to attend. Dr. Brush reported a conference with Mayor George Harvey of Port Huron with regard to a campaign of vaccination of school children. The subject was discussed and it was decided that children whose parents were able to pay for such service be referred to their own physician and the indigents taken care of in the usual manner without charge. Dr. Waters reported for the Legislative Committee the many trips made to Lansing in behalf of the Basic Science Bill and urged as many who could so arrange to visit Lansing Thursday, April 22, to impress the legislature and encourage favorable action. Doctors A. A. Engelman of Saint Clair and R. H. Holcomb of Marine City were elected to active membership in the Society. Discussion of the activities of irregular healers and counter prescribing druggists were discussed by Doctor Heavenrich and others. Doctor W. D. Barrett of Detroit addressed the Society on the theme, "Some Difficulties Encountered in Gall-Bladder Surgery." Many lantern slides of roentgenologic plates of the upper right abdominal quadrant were shown during the address. Discussion followed by Doctors R. M. Burke, J. A. Attridge, A. J. MacKenzie, Reginald Smith and E. C. Sites. Doctor Barrett closed the program in the usual manner. Dr. H. W. Ulch, resident of Harper Hospital, attended as a guest.

## WASHTENAW COUNTY

L. J. JOHNSON, M.D.
*Secretary*

The March meeting of the Washtenaw County Medical Society was held in the Ladies' Dining Room of the Michigan Union on March 9, 1937. Dr. Sidney LaFever, president-elect, was in the chair. Thirty-three members attended. The minutes for January which appeared in the Bulletin in February were approved.

The secretary announced that the venereal disease program for Michigan was under way and that further information would be received from the State Medical Society within a few weeks. Members were urged to watch for this announcement so as to avail themselves of the new methods in treatment of venereal diseases.

Resolutions from the State Society regarding the transferring of the U. S. Public Health Service from the Treasury Department and making it a bureau in a proposed Department of Public Welfare were read. The Society recommended the creation of a Public Health in the national government to include all activities in the field of preventive medicine now performed by the various departments thus eliminating duplications of this service. Also that the direction of such a medical or health department should be in the hands of a competently trained physician, experienced in executive administration.

A letter from President Henry E. Perry asking us to wire Representative Earl C. Michener at Washington, D. C., protesting against a proposed bill which would amend the United States Employee's Compensation Act so every osteopath in the United States would be authorized to treat injured and sick employees in the federal government throughout the United States on a par with fully qualified physicians. Your secretary sent a night letter on March 9 carrying this society's protest, and on March 11, 1937, we received an acknowledgment from Representative Michener.

Attention was called to an article which appeared in *Coronet* (March issue) in which it was stated that milk was the cause of cancer and other serious diseases. A letter has been written to the American Medical Association regarding the author and the article.

Applications for membership were: Dr. Harold Miller of Saline and Dr. Thomas Blair, Jr., of Ann Harbor and Arlee MacKenzie of Ypsilanti State Hospital. They were recommended by the censor committee and unanimously elected to membership.

A program for lay education regarding cancer was presented by Dr. O. A. Brines, pathologist at Receiving Hospital, Detroit. This program is based on lantern slides, booklets and talks by physicians on cancer, which are supplied by the committee on Joint Education. "Cancer is curable if diagnosis is made early"—was the main thread of thought throughout the lecture and pictures submitted by Dr. Brines.

This excellent presentation was discussed by Drs. Cummings, Ransom, Teed, Britton, Echols and Folsom.

The meeting adjourned at 8:35 p. m.

# WOMAN'S AUXILIARY



Dear Auxiliary Members:

Your Secretary-Treasurer is very grateful to the county auxiliaries who so promptly sent in their state and national dues. This was required in order that we might pay our National obligations by the

Mrs. Carl F. Snapp

last of March and thus keep the auxiliaries of Michigan in good standing in the National Society; as you must know, each individual member loses her standing in both the state and national organization, if her dues are not paid by the prescribed time.

During the past few years when it was difficult for many of our members to pay the required amount of dues in full, the State Treasury absorbed a portion of the state dues as a temporary relief measure. This procedure, however, depleted our treasury and crippled our activities, especially those connected with the organization of new auxiliaries. In order to again obtain a working capital it became necessary for each member to again pay the full assessment of seventy-five cents to the State and twenty-five cents to the National Treasury in addition to the local dues. To this request the response has ben most gratifying from all of the auxiliaries.

Our State President, Mrs. A. V. Wenger, has appointed the nominating committee to select the candidates for president and vice president at the coming election in the fall. This committee consists of: Mrs. J. Earl McIntyre, 600 Grand Ave., Lansing, Mich., Chairman; Mrs. F. T. Andrews, 2325 Crane Ave., Kalamazoo, Mich., Mrs. P. R. Urmston, 1862 McKinley Ave., Bay City, Mich.; Mrs. Frank Gerls, 536 N. Huron St., Pontiac, Mich. If any of the auxiliaries wish to name a candidate for either of these offices, kindly communicate with Mrs. McIntyre or any member of her committee.

Thanking you again for your coöperation, I am

Sincerely yours,
Mrs. Carl F. Snapp,
*Secretary-Treasurer.*

## COUNTY PRESS CHAIRMEN PLEASE TAKE NOTICE

All Auxiliary material to be exhibited at the National Convention in Atlantic City must be in the hands of the Michigan State Press Chairman not later than May 28.

It is desired that records and examples of the Educational (especially health), social, welfare, and historic activities of each state be displayed to serve as a guide to states that may not be as far advanced in such work.

Because of the tremendous amount of material that will be sent to the convention, plus the fact that the time of visitors will be limited and only the high lights may be seen, an effort will be made to arrange exhibits so that main points and values may be easily assimilated.

Diagrams, posters, or scrapbooks of clippings will be used. Should it be the latter an open index or small chart of their contents will be made to designate pages where individual reports or types of activity may be located.

It is further desired that typewritten lists, in duplicate, of material sent, by whom sent, and to whom and where it is to be returned accompany all exhibits.

(Mrs. Frank W.) Blanche B. Hartman.

## COUNTY AUXILIARIES

### Bay County

The regular meeting of the Bay County Auxiliary was held March 10, at the home of Mrs. P. R. Urmston. After the dinner a short business meeting was held. After a report from the nominating committee there was election of officers. All of our last year's officers were reëlected for a second year.

Dr. Foster then spoke on "The Basic Science Law," and literature on the subject was passed to all members.

Mrs. E. S. Huckins offered to open her home for our next meeting, which will be held the second week in April.

(Mrs. C. S.) Elizabeth Tarter.

### Monroe County

A group of doctors' wives met at the Park Hotel recently to organize an Auxiliary to the Monroe County Medical Society.

Mrs. Albert H. Reisig served as temporary chairman, and Dr. Florence Ames, chairman of the Advisory Committee of the Medical Society, was present to offer counsel. Mrs. R. J. Williams, Mrs. M. A. Hunter, and Mrs. J. A. Humphrey composed the nominating committee. Mrs. W. W. Bond and Mrs. T. A. McDonald drew up the Constitution. Their object will be to assist the members of the Medical Profession in their efforts to abolish the afflictions of mankind and to promote social activities.

The Auxiliary will meet the same evening the Medical Society holds their meeting.

Mesdames C. J. Golinvaux, C. J. Stolpestad, J. J. Siffer, E. C. Loud, W. F. Acker, D. C. Denman, L. C. Blaker, S. V. Dusseau, of Erie, Mich., O. E. Parmelee, of Lambertville, and Wm. Stewart, of Petersburg, were also present. Congratulations are extended to this new group. May success crown their effort.

### Saginaw County

Dr. Henry A. Luce was guest of honor at a dinner for forty doctors and their wives at the home of Dr. and Mrs. Arthur E. Leitch preceding the annual public relations meeting of the Saginaw County Medical Auxiliary, which took place in conjunction with the South Intermediate Parent-Teacher Association. Mrs. Robert Jaenichen, general chairman, was assisted by Mrs. William Martzowka, Mrs. A. R. Moon, Mrs. L. A. Campbell, Mrs. L. C. Harvie, Mrs. Frank O. Novy, Mrs. R. M. Kempton and Mrs. J. A. McLandress.

Dr. Luce spoke on mental hygiene. He declared that mental disorders should be recognized as an illness no worse than appendicitis or the itch, which, if given early treatment, could be cured. Dr. Luce said, "Mental disease develops gradually and displays warning signs, contrary to the popular belief that it appears suddenly. The greater number of cases arise from the individual's inability to adjust himself to his environment. There is a general misconception on this subject. While between 10 and 17 per cent of the patients in mental institutions are caused by syphilis, more than 40 per cent are there simply because they were unable to adjust themselves to their environment." Because these mental cases could be cured, it was necessary that the state have facilities to care for them, Dr. Luce said, citing cases to show the harm done by permitting mental patients to remain with their families because of overcrowded hospital conditions in Michigan. Because mental illness does develop gradually and produces warning signs, he advised that people consult their family doctors about mental health.

Mrs. A. R. Moon, member of the auxiliary's public relations committee, introduced Dr. Luce. Mrs. Carl F. Miller, parent-teacher program chairman, had charge of the meeting, and Mrs. Robert G. Leckie sang, accompanied by Miss Elizabeth Walz.

(Mrs. L. C.) Della A. Harvie,
*Press Chairman.*

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### Diphtheria Mortality in Large Cities of the United States in 1935: Thirteenth Annual Report on Diphtheria

The thirteenth annual report on diphtheria mortality (*Journal A.M.A.,* June 13, 1936) concerns the ninety-three cities dealt with in the recent article on typhoid. Of the fourteen New England cities, half of their number passed through the year without a single death from diphtheria. The registration of only twenty-eight deaths from diphtheria in 1935 in the whole New England group (population 2,624,805) is remarkable. The eighteen cities of the Middle Atlantic states still rank as the best geographic group in the country as regards diphtheria mortality. Only three cities had a rate higher than 2.0 and eight of the eighteen had no diphtheria deaths. The nine cities of the South Atlantic group did not, on the whole, do as well in 1935 as in 1934, Wilmington, Washington, Miami and Tampa showing an increase in diphtheria mortality. Jacksonville alone in this group shows marked improvement. The cities in the East North Central states had a relatively poor diphtheria year, the divisional group rate rising from 1.89 in 1934 to 2.45 in 1935, an increase which suggests that renewed efforts in some communities should be made to bring about a general inoculation of children. The East South Central cities in 1935 show a marked group improvement over 1934 in diphtheria mortality. This is particularly marked in Louisville, Chattanooga and Nashville. The West North Central division shows some improvement over 1934; this is particularly marked in the case of St. Louis and Kansas City, Kan. The St. Louis rate appears to be the lowest ever recorded by that municipality. This is true also for Minneapolis and St. Paul, with the relatively low rates of 0.6 and 0.7, respectively. Duluth seems to have been remarkably free from diphtheria for a number of years and is likely to hold its place in the present decade as the leader in the West North Central group; the disease is said to have practically disappeared from that city. The West South Central states remain in almost exactly the same position as in 1934, a slight increase from 5.48 to 5.58 being indicated. The cities in the Mountain and Pacific states experienced higher diphtheria mortality in 1935 than in 1934, the increase in Oakland being particularly striking. The number of cities with diphtheria death rates over 10 decreased from four in 1934 to two in 1935 and those with no diphtheria deaths increased from fifteen to nineteen. The number of diphtheria deaths reported in 1935 was 764 as compared with 821 in 1934 and 3,133 in 1925, ten years ago. The striking feature in the 1935 diphtheria record appears to be that wherever preventive inoculation against diphtheria is practiced consistently diphtheria deaths well-nigh cease to occur, and in some communities diphtheria morbidity is also reduced to an insignificant figure.

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### RHEUMATISM IN CHILDHOOD: ITS RECOGNITION AND TREATMENT

*(Continued from page 302)*

often very difficult leaving the physician in genuine doubt as to the existence of the disease when treatment will do the most good. Infections of the upper respiratory tract, particularly the teeth and tonsils if due to streptococcus invasion should be regarded with the utmost concern. Coburn[2] has stressed the latent period following streptococcus infection of the throat, lasting about two weeks following which signs of heart disease set in. It is well for us to consider this clinical observation seriously. Were it not for the extensive cardiac damage it produces, rheumatism would not be such a menace.

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MICHIGAN'S DEPARTMENT OF HEALTH
C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

## MAJOR CAUSES OF DEATH IN 1936

Ten major causes of death, the total mortality of which equaled 70 per cent of the 54,777 deaths recorded in Michigan in 1936, have been determined by the Bureau of Records and Statistics.

Heart disease again leads the list by a wide margin with a total of 10,010 deaths, an increase over the 9,603 deaths reported the previous year. Cancer deaths, too, were up over the 1935 total, 5,543 deaths being reported in 1936 and 5,191 in 1935. Deaths by violence moved into third position, 5,246 deaths being attributed to this cause. This total includes 1,009 deaths attributed to heat prostration last summer and 1,913 deaths due to automobile accidents.

Cerebral hemorrhage ranked in fourth place in 1936 with a total of 4,175 deaths, the only major cause of death to show a decrease in comparison with 1935 figures. Pneumonia deaths rose sharply in 1936 to a new high figure of 4,096 deaths in contrast with 3,802 in 1935. Nephritis was in sixth place with a mortality of 3,038.

Angina and coronary disease showed a 22 per cent increase in mortality, 2,888 deaths being reported in 1936 compared with 2,352 in 1935. Even tuberculosis was halted in its downward trend of the past few years, a slight increase of 58 deaths being indicated in the total of 2,102 deaths reported in 1936. Premature birth was in ninth place with a mortality of 1,395, and diabetes completed the list of ten major causes with a total of 1,266 deaths.

## MONTHLY INCIDENCE OF COMMUNICABLE DISEASE

Practically all of the common communicable diseases show some increase in incidence so far this year when compared with the same period of last year.

Cases of pneumonia reported have been running about 20 per cent in excess of those for 1936.

For tuberculosis, there has been an increase of nearly 33 per cent. This perhaps is a favorable situation inasmuch as the death rate has not increased, and the increase in cases reported is due to better case finding.

There has been a slight increase in typhoid fever as judged by reports, but this is not significant.

There has been a considerable increase in the incidence of diphtheria which has been heretofore quite low. The increase is mostly accounted for in the southeastern part of the state.

An increase of about 25 per cent has been noted in the number of cases of whooping cough reported.

The scarlet fever incidence has been quite high, in fact, the highest for a number of years, and is more than three times as great as in the early part of 1936.

The increase in measles incidence has been slight and so far is not significant although it is anticipated that there will be a greater number of cases reported this year than during the very low year of 1936.

Smallpox, during the early part of the year, was quite low, but due to a recent outbreak in Dundee the incidence is considerably above that of last year.

The incidence of meningococcic meningitis is slightly in excess of 1936 although it is not alarming.

The number of cases of poliomeylitis reported is very low, and the slight increase this year as compared to 1936 has no significance.

The number of cases of syphilis and gonorrhea reported has increased considerably, but such increase is due in part, no doubt, to the publicity recently given these diseases.

## BAY COUNTY HEALTH OFFICER APPOINTED

Dr. R. T. Westman has been appointed as director of the recently organized Bay County Health Department. Dr. Westman received his public health training at Johns Hopkins and comes to Michigan from Minneapolis where he served as epidemiologist with the municipal health department.

Appointment of Dr. Westman completes the organization of the 32 county and district health departments in this state, serving 54 per cent of the rural population and 10.7 per cent of the urban population. Full-time city health departments are also providing health protection services for 70.2 per cent of the urban population; thus, 72.3 per cent of the total population of the state is provided with full-time local health departments.

## SURVEY OF OCCUPATIONAL DISEASES

The Bureau of Industrial Hygiene on February 10 sent to 4,943 Michigan physicians a questionnaire regarding all cases of industrial diseases treated since March 1, 1936. Information gained from the questionnaire was to form the basis for a more scientific approach to the prevention of occupational disease hazards in this state. To date, but 382 physicians have contributed the information requested, 7.7 per cent of the total number surveyed.

Of the physicians reporting, 261 stated that they had not treated any such cases. There were 121 physicians who reported treating a total of 254 cases of occupational disease. From these case records the prevalence of these diseases was indicated as follows: Silicosis, thirty-six cases; lead poisoning, thirty-seven cases; poisoning from gases, vapors or fumes, thirty-two cases; dermatitis, ninety-eight cases; and all other causes, fifty-one cases.

Physicians who have not yet returned the questionnaire are urged to do so in order that the fullest possible benefits may be obtained from the survey. Increasing attention being devoted to occupational diseases makes the information gained in such a survey essential to an effective program of prevention.

## NUTRITION PROGRAM ORGANIZED

The addition of a staff nutritionist has enabled the Bureau of Child Hygiene and Public Health Nursing to organize an educational program in nutrition as an integrated part of several of its established activities.

The child care classes conducted in the high schools will now receive lectures and demonstrations of infant diets in addition to the regular course of instruction. Two lectures in nutrition are also being added to the series offered in the women's health classes. These lectures include a discussion of the principles upon which adequate diet is based, the selection and preparation of low-cost foods, and the planning of the daily diet for various members of the family group.

Since the hot school lunch is a difficult problem in many of the rural schools, a lecture on this subject is now included in the series offered by the de-

partment to the prospective rural teachers in the county normal schools. The importance of various foods to the school child is emphasized and methods for the application of good nutrition in the rural school program are suggested. The nutritionist is also available for advisory service in home calls with public health nurses.

## MICHIGAN SEWAGE WORKS CONFERENCE

The Michigan Sewage Works Association sponsored by the Michigan Department of Health held its thirteenth annual conference at Michigan State College March 29 to April 2, with approximately 100 sewage plant operators from all parts of the state in attendance.

The first half of the conference was devoted to a short course in laboratory instruction conducted by the Bacteriological and Engineering Divisions of the College. The second part of the conference program included papers and round table discussions of chemical and bacteriologic aspects of sewage treatment as well as plant hydraulics and design apropos of Michigan's treatment plants.

## NEW RULES AND REGULATIONS FOR THE CONTROL OF COMMUNICABLE DISEASES

The revised rules and regulations for the control of communicable diseases were officially adopted by the State Council of Health at its meeting on March 26, 1937. Printed copies of the revised rules may be obtained upon request to the Michigan Department of Health or local full time health officers.

Botulism, chancroid and psittacosis have been added to the list of reportable diseases, and streptococcic (septic) sore throat has been made reportable in epidemics only. The revised tuberculosis regulations include the following: "No person who has an active tuberculosis of the adult type shall be permitted to handle milk or dairy products or other food which is intended for sale."

General regulations for the control of communicable diseases among food handlers have been strengthened by the following: "No person who suffers from diphtheria, scarlet fever, smallpox, poliomyelitis, meningococcic meningitis or streptococcic (septic) sore throat, or who resides in the household with a case of any of these diseases or is a carrier of the organisms causing any of them shall serve or handle in any manner whatsoever food intended for sale."

The following regulations have been added regarding the control of trachoma:

"Cases and suspected cases shall be reported.

"No one with an active case of trachoma shall be permitted to attend school. Such cases shall be excluded from public gatherings. Isolation is optional with the local health officer.

"Contacts of cases shall be kept under observation (not isolation)."

Major changes were made in the rules and regulations for the control and eradication of typhoid fever and typoid carriers. The new rules and regulations are in line with the present intensive efforts of the department to effectively control the menace of the typhoid carrier. The complete set of new rules and regulations is as follows:

MICHIGAN DEPARTMENT OF HEALTH
LANSING
RULES AND REGULATIONS FOR THE CONTROL AND ERADICATION OF TYPHOID FEVER

**Definitions**

**An Incubatory Typhoid Carrier is one who excretes typhoid organisms previous to onset of typhoid fever.**

**A Contact Typhoid Carrier** is one who excretes typhoid organisms without having clinically recognizable typhoid fever and whose history indicates that exposure occurred less than one year previous to date of discovery.

**A Convalescent Typhoid Carrier** is one who excretes typhoid organisms during the period from date of becoming afebrile to one year from date of onset.

**A Chronic Typhoid Carrier** is one who continues to excrete typhoid organisms for more than one year after onset of typhoid fever or for more than one year after a non-clinical infection.

**A Professional Food Handler** is one who, wholly or in part, makes his or her living by preparing, dispensing or serving food for public consumption.

**Reporting of Cases and Suspected Cases**

Cases shall be reported. Suspected cases shall be reported as "suspects" and the department shall be notified of the final diagnosis made.

**Exposed Persons**

Persons living on premises with a case of typhoid fever shall not engage in any occupation connected with the production for sale of milk or milk products or other foods unless arrangements are made which are satisfactory to the Michigan Department of Health.

**Isolation and Release of Cases and Convalescent Carriers**

Cases not professional food handlers shall be isolated until afebrile for 48 hours and thereafter until three consecutive fecal specimens obtained from bowel movement not less than 24 hours apart have been found negative in an approved laboratory; or until one satisfactory bile specimen has been found negative in an approved laboratory.

The local health officer shall report the date of the case becoming afebrile to the Michigan Department of Health.

If more than three months have elapsed since the date of onset, a case or convalescent carrier may be released if one satisfactory bile specimen is negative or if consecutive fecal specimens are negative in the ratio of one for each month elapsed since date of onset.

Professional food handlers shall be released as above except that four consecutive negative feces and four consecutive negative urine specimens shall be considered minimal for release.

Hospitalized cases may be released in the same manner as cases and convalescent carriers isolated at home. Hospitalized cases may be discharged to continue isolation at home provided hospital authorities notify the local health officer and the Michigan Department of Health previous to discharge and furnish bacteriologic reports up to time of discharge.

Convalescent Carriers who remain positive two weeks after becoming ambulatory may be conditionally released to live under the restrictions for chronic typhoid carriers provided consent is obtained from the local full-time health officer or from the Michigan Department of Health.

**Disposition of Suspected Cases and Suspected Carriers**

In addition to those persons reported as typhoid suspects, the Michigan Department of Health shall, in the absence of more definite information, consider as a case or carrier suspect any person from whom a positive Widal, blood, feces, urine, bile, saliva, pus, or transudate has been obtained. Disposition of such cases shall be made as follows:

1. **Positive Widal**

   A statement shall be obtained from the attending physician or local health officer that the suspect has typhoid fever, may have typhoid fever, or definitely does not have typhoid fever. If the attending physician is unwilling to make a definite diagnosis, it shall be the duty of the full-time local health officer or a representative of the Michigan Department of Health to determine the most probable diagnosis based upon clinical, epidemiologic, and bacteriologic evidence.

2. **Positive Blood Culture**

   A positive blood culture shall be considered prima facie evidence that the suspect has typhoid fever.

3. **Positive Feces, Urine, or Bile**

   A positive feces, urine, or bile shall be considered prima facie evidence that the suspect is a case or a carrier. In the absence of a case report, the Michigan Commissioner of Health and the local full-time health officer shall require such specimens as will determine the status of the person.

**Reporting of Carriers**

The local health officer shall report to the Michigan Department of Health any carrier entering or leaving his jurisdiction, as well as any change in residence and post office address occurring within his jurisdiction.

A typhoid carrier admitted to a hospital shall be imme-

diately reported to the Michigan Department of Health by the hospital authorities.

The Michigan Department of Health shall report change in location of a carrier to the local health officer concerned. If the carrier leaves the state, the new location shall be reported to the state health department concerned and to the United States Public Health Service.

**Change of Address**

A typhoid carrier shall not make a change of residence unless the Michigan Department of Health and the local full-time health officer have been notified of such change at least five days previously. No visit shall be made to another state or county unless the Michigan Department of Health has been notified as to itinerary and destination.

**Submission of Specimens**

Typhoid carriers and carrier suspects shall submit for examination such specimens as are required by the Michigan Commissioner of Health.

**Authenticity and Acceptability of Specimens**

The Michigan Commissioner of Health may take such steps as may be necessary to assure himself of the authenticity of specimens.

Bile specimens in which typhoid organisms are not found shall be officially recognized for the release of cases and carriers or for the determination of a focus of infection only if such specimens are (1) amber, clear, viscous, neutral or alkaline, (2) obtained not less than five minutes after stimulation with epsom salts, (3) placed in buffered broth immediately after procurement, and (4) received in the laboratory not more than 48 hours after bile drainage.*

**Carrier Release**

A chronic typhoid carrier shall be unconditionally released one year following a date fixed by the Michigan Commissioner of Health if twelve consecutive fecal specimens submitted at approximately monthly intervals and two consecutive bile specimens are negative.**

Upon fulfillment of requirements, the former carrier shall receive a statement of his unconditional release from the Michigan Commissioner of Health.

Two months following cholecystectomy a typhoid carrier may be permitted to handle food for public consumption, provided six consecutive fecal specimens obtained at intervals of not less than 24 hours and one bile specimen are negative, and provided that the typhoid carrier continues to submit specimens to obtain final release.

**Occupational Restrictions**

Typhoid carriers shall not handle for public consumption milk, cream, cheese, ice cream and other dairy products, or fruits and vegetables unless such fruits and vegetables are commonly cooked before being eaten.

No typhoid carrier shall reside on premises where milk or milk products are being handled for public consumption unless such milk or milk products are delivered to a condensary or evaporating plant under circumstances satisfactory to the condensary or evaporating plant and to the Michigan Department of Health.

No typhoid carrier shall work in any capacity in a restaurant or other establishment in which food is sold unless in the opinion of the local full-time health officer and the Michigan Commissioner of Health the possibility of infecting others is remote.

**Excreta Disposal**

The excreta of a typhoid carrier shall be disposed of in a manner satisfactory to the Michigan Department of Health.

**Care of Clothing**

No typhoid carrier shall send personal clothing or bed linen to a public laundry unless such is first disinfected in a manner satisfactory to the Michigan Department of Health.

**Coöperation Between Carrier and Local and State Health Officials**

The premises of any typhoid carrier, or of any person suspected of being a typhoid carrier, may be placarded if such person refuses to comply with the rules and regulations of the Michigan Department of Health.

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*The laboratory will examine, however, any specimens submitted as bile.

**A typhoid carrier may submit specimens at any time for the purpose of obtaining unconditional release.

# General News and Announcements

**The One Hundred Per Cent Club** of the Michigan State Medical Society:

1. Alpena County Medical Society.
2. Branch County Medical Society.
3. Cass County Medical Society.
4. Clinton County Medical Society.
5. Eaton County Medical Society.
6. Gogebic County Medical Society.
7. Ingham County Medical Society.
8. Lapeer County Medical Society.
9. Lenawee County Medical Society.
10. Livingston County Medical Society.
11. Luce County Medical Society.
12. Manistee County Medical Society.
13. Menominee County Medical Society.
14. Muskegon County Medical Society.
15. Newaygo County Medical Society.
16. Northern Michigan Medical Society.
17. Oceana County Medical Society.
18. Ontonagon County Medical Society.
19. Schoolcraft County Medical Society.
20. Tuscola County Medical Society.

The above County Medical Societies have paid dues in full for each and every member of the County and State Medical Society. A number of other County Societies lack but a few, sometimes only one or two, of being One Hundred Per Cent. Have YOU paid your dues?

**Dr. George L. Waldbott** of Detroit spoke to the Bay County Medical Society on "Allergy" on March 24.

**"The Evils of Socialized Medicine"** was the subject of a talk given by Dr. L. Fernald Foster before the Saginaw Exchange Club on April 6.

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**Dr. Walter L. Finton,** of Jackson, spoke before the Eaton County Medical Society, March 25, 1937, on "Treatment of Gall-Bladder Disease."

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**The State of Pennsylvania** has six physicians in the Senate and eight in its House of Representatives.

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**Dr. Walter L. Finton** of Jackson gave a talk on "The Treatment of Gall Bladder Disease" before the Eaton County Medical Society on March 25.

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**Intra-Abdominal Adhesions,** an Experimental and Clinical Study, is the title of a paper by Dr. Leon M. Bogart, which appeared in the January number of the *Archives of Surgery.*

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**The annual banquet** of the Phi Beta Pi Medical Fraternity was held this year in the Spanish Grill of the Fort Shelby Hotel, Detroit, Saturday evening, April 24, 1937.

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**Dr. Norman R. Kretzschmar** of the University Hospital, Ann Arbor, addressed the Muskegon County Medical Society, April 16, on the subject "Clinical Aspects of Endocrinology."

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**Dr. Thomas Parran, Jr.,** Surgeon General of the United States Public Health Service, will ad-

dress members of the Michigan State Medical Society in Grand Rapids at the Annual Meeting, on Wednesday, September 29, 1937.

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**Wanted: Young physician** who desires a partnership practice in a city of approximately 30,000 population; single man, who can do tonsillectomies preferred. For further information write the Executive Office, 2020 Olds Tower, Lansing.

* * *

**Dr. Loren Shaffer** of Detroit, chairman of the Advisory Committee on Syphilis Control of the Michigan State Medical Society, spoke on "The Program for Control of Venereal Diseases in the State of Michigan" at the meeting of the Bay County Medical Society on April 14.

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**Mead Johnson & Company** is extended our sincere thanks for relinquishing the front page of this issue of THE JOURNAL so that we might make a special cover for The Directory Number. Mead Johnson's advertisement will be found this month on the inside back cover.

* * *

**Some of the County Medical Societies** of Michigan publish on their stationery the names of all their members. Typical of this is the Dickinson-Iron County Medical Society. Dr. D. R. Smith and Dr. W. H. Huron of Iron Mountain are president and secretary, respectively.

* * *

**The Northern Tri-State Medical Association** held its annual meeting in Jackson, Michigan, at the Hayes Hotel, on April 13. Many speakers of national prominence were on the program. Dr. W. H. Marshall of Flint is president and Dr. Robert H. Elrod of Toledo, Ohio, is secretary.

**The Local Committee on Arrangements** for the 1937 Annual Convention of the Michigan State Medical Society to be held in Grand Rapids is composed of Dr. Vernor M. Moore, Chairman, Dr. M. S. Ballard, Dr. Leon De Vel, Dr. Wm. R. Torgerson, and Dr. A. V. Wenger, all of Grand Rapids.

* * *

**Dr. Maxwell J. Lick,** president of the Pennsylvania State Medical Association, will be one of the principal speakers at the annual convention of the Michigan State Medical Society in Grand Rapids on September 28, 1937. Dr. Lick is one of the outstanding orators of the country.

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**Dr. Thomas B. Cooley,** Professor of Pediatrics, Medical Department of Wayne University and Chief of Staff of the Children's Hospital of Michigan, has been named executive secretary of the Council for Pediatric Research of the American Academy of Pediatrics.

* * *

**The American Association for the Study of Goiter** will hold its 1937 annual meeting on June 14, 15, 16, in Detroit at the Book-Cadillac Hotel. The program lists many physicians of national prominence. Physicians interested are invited and welcome. For further information write Dr. W. Blair Mosser, Kane, Pennsylvania.

* * *

**Dr. S. L. LaFever** of Ann Arbor suggests that all County Medical Societies should choose a President-Elect each year, thereby giving two years' experience and a better working knowledge of policies to the presiding officer. The President-Elect automatically takes office as President the year following his election.

**Dr. Don Marshall,** Assistant Professor of Ophthalmology, University of Michigan, has been appointed director of the Department of Ophthalmology of the George F. Geisinger Memorial Hospital, Danville, Pennsylvania. The trustees of the hospital announced that the hospital is ready to receive patients as of April 26.

* * *

**Dr. Nathan J. Frenn** of Bark River, secretary-treasurer of the Delta County Medical Society, is successful in bringing out 100 per cent attendance at the monthly meetings of the medical society by sending a personal letter to each member, explaining the background of the subject to be presented, and pertinent notes about the lecturer. Congratulations!

* * *

**The American Board of Ophthalmology** will conduct examinations in Philadelphia, June 7, 1937, and in Chicago, October 9, 1937. All applications and case reports, in duplicate, must be filed at least *sixty days* before the date of the examination. For further information write Dr. John Green, Secretary, 3720 Washington Blvd., St. Louis, Missouri.

* * *

**Play Golf** with A.M.A. Fellows on Monday, June 7. Beautiful Seaview Country Club, Atlantic City, N. J., will attract 200 members of the American Medical Golfing Association who will compete in 36 or 18 hole competition for approximately 100 trophies and prizes.

For application blank and full particulars write Bill Burns, 731 N. Capitol Ave., Lansing, Mich.

* * *

**At the Annual Meeting of the American Medical Association** in Atlantic City, June 7 to 11, 1937, Dean J. H. J. Upham of Ohio State University will become the new President of the A.M.A. Dr. W. H. Martin, 12207 Woodward Avenue, Detroit, President of the Medical Alumni of Ohio State University, requests that all alumni of Ohio attend this Convention. Those wishing to go by automobile may leave Detroit June 5 with Dr. Martin's group.

* * *

**Macomb and St. Clair County Medical Societies** held a joint meeting on Tuesday, April 6, at the Concord Club, Mt. Clemens. Dr. Wm. S. Reveno of Detroit gave a scientific paper on "Hyperthyroidism." Others present at this joint meeting were President Henry E. Perry of Newberry, Secretary L. Fernald Foster of Bay City, and Executive Secretary Wm. J. Burns of the State Society.

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**Dr. F. P. Husted** of Bay City gave a paper entitled "Delayed Operative Treatment of Ruptured Appendicitis" at the Mecosta-Osceola County Medical Society meeting of Tuesday, April 13, which was held in Big Rapids. "Allergy" was the subject of a paper presented by Dr. Wm. G. Gamble, Jr., Pathologist at Mercy Hospital, Bay City, at the same meeting. Dr. L. Fernald Foster, Secretary of the Michigan State Medical Society, spoke on "State Society Activity."

* * *

**The Michigan Conference on Education and Mental Health** met under the auspices of The Michigan Society for Mental Hygiene and The National Committee for Mental Hygiene at the Hotel Statler, Detroit, on April 16, 17, 1937. Dr. Grover C. Penberthy of Detroit acted as Chairman of the Committee on Arrangements. Among others who served on this committee were Dr.

Harry J. Baker, Dr. Hugo A. Freund, Dr. Robert H. Haskell, Dr. George F. Inch, and Dr. Henry A. Luce.

* * *

**The District Department of Health No. 6** comprising Luce, Mackinac, Schoolcraft Counties in the Upper Peninsula celebrated its Second Anniversary March 19, 1937, at Newberry, Michigan, with a very successful Public Health Meeting. Dr. Henry E. Perry of Newberry, president of the Michigan State Medical Society, was chairman of the meeting. About 300 persons interested in health came from all parts of the Upper Peninsula. Close relationship in health matters with the family physician was emphasized particularly. Dr. C. D. Hart is the District Health Officer.

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**Crippled and Afflicted Child commitments** for March, 1937:

*Crippled Child:* Total of 206. Of the total number 96 went to the University Hospital and 110 went to miscellaneous hospitals. From Wayne County (included in above totals): Total cases, 56. Of the 56 cases in Wayne County, 7 went to University Hospital, and 49 to local hospitals.

*Afflicted Child:* Total of 1,428. Of the total number 293 went to University Hospital and 1,135 went to miscellaneous hospitals. From Wayne County (included in above totals): Total cases 324. Of the 324 cases in Wayne County, 24 went to University Hospital, and 300 went to miscellaneous hospitals.

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**Summer Diarrhea in Babies.** Casec (calcium caseinate), which is almost wholly a combination of protein and calcium, offers a quickly effective method of treating all types of diarrhea, both in bottle-fed and breast-fed infants. For the former, the carbohydrate is temporarily omitted from the twenty-four-hour formula and replaced with eight level tablespoonfuls of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of dextrimaltose may safely be added to the formula and the casec gradually eliminated. Three to six teaspoonfuls of a thin paste of casec and water, given before each nursing, is well indicated for loose stools—in breast-fed babies. Samples may be obtained from Mead Johnson & Company, Evansville, Indiana.

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**The first medical supplement** in Michigan newspapers will appear in the *Detroit Free Press* sometime in May. The supplement will be published under the auspices of the Wayne County Medical Society who will furnish appropriate material concerning the organization of the County Medical Society and stories about medical projects, medical men and other articles which will acquaint the public with its friend—the Family Doctor.

This is a project which can be worked out in practically every county in the state and is well worth while. You can build up the goodwill of the public—your patients—through this medium. Contact the editor of your local newspaper and urge him to coöperate with the county medical society by publishing a supplement. He will welcome the opportunity.

* * *

**Grand Rapids has two new hospital superintendents.** Both arrived to assume their duties on March 30. Dr. Norbert A. Wilhelm comes from Boston to assume the management of Butterworth Hospital. He was assistant medical director of a large sugar plantation in Puerto Rico, following which position he obtained a fellowship of one and

*(Continued on Page 338)*

a half years in neuropsychiatry at the Henry Ford Hospital. He was later assistant superintendent of the Peter Bent Brigham Hospital, Boston.

Dr. John E. Gorrell comes from Pittsburgh to take over the medical directorship of the Blodgett Memorial Hospital. Dr. Gorrell is a native of Chicago where he received his education. He was assistant superintendent of the Chicago Clinics following which he was superintendent of the Falk Clinic of the University of Pittsburgh.

Both Dr. Wilhelm and Dr. Gorrell are young men in the middle thirties.

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**A Woman's Auxiliary** to the Monroe County Medical Society was organized on March 18. Mrs. Albert H. Reisig acted as temporary chairman and Dr. Florence Ames, Chairman of the Advisory Committee of the Woman's Auxiliary of the Michigan State Medical Society, was present to offer assistance. Mrs. Robert J. Williams, Mrs. M. A. Hunter, and Mrs. J. A. Humphrey were chosen as a nominating committee. Mrs. W. W. Bond and Mrs. T. A. McDonald will compose the committee on the constitution. The Auxiliary will meet once a month on the same evening that the medical society meets. Their object is to assist members of the medical profession in their efforts to abolish the afflictions of mankind and to promote social activities.

Those present at the organization meeting were Dr. Ames, Mrs. Humphrey, Mrs. Hunter, Mrs. Bond, Mrs. McDonald, Mrs. Williams, Mrs. Reisig, Mrs. C. J. Golinvaux, Mrs. C. T. Stolpestad, Mrs. J. J. Siffer, Mrs. E. C. Long, Mrs. W. F. Acker, Mrs. D. C. Denman, Mrs. L. C. Blakey, Mrs. S. V. Dusseau of Erie, Mrs. O. E. Parmelee of Lambertville, and Mrs. William Stewart of Petersburg.

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**Michigan Association of Roentgenologists**

The regular quarterly meeting of the Michigan Association of Roentgenologists was held at the Statler Hotel, Detroit, on April 21. Following the business meeting at 5 P. M., there was a subscription dinner after which the evening was devoted to a scientific program as follows:

"Incidence of Thymic Hypertrophy and the Use of Iodized Salt"—Drs. Donaldson and Towsley.

"Bone Syphilis"—Dr. D. M. Stewart, Toledo, Ohio.

"Roentgenographic Visualization of Pulmonary Arterial Circulation in Autopsy Material"—Dr. C. C. Birkelo.

Among those present were: Drs. A. R. Bloom, John B. Jackson, Rollin H. Stevens, R. W. Cooley, D. W. Patterson, S. W. Donaldson, A. W. Chase, A. K. Payne, J. H. Dempster, A. L. Ziliak, G. C. Chene, L. Reynolds, Ruth Bigelow, J. C. Kugler, V. M. Moore, E. R. Witwer, T. Leucutia, H. W. Porter, L. E. Holly, H. A. Jarre, L. F. Wilcox, Howard P. Doub, J. E. Lofstrom, M. W. Clift, Henry L. Ulbrich, Wm. S. Wallace, Gerald J. Bernath, Clyde Hasley, J. C. Kenning, C. S. Davenport, Carl Pierce, Bruce MacDuff, C. E. Weaver, and C. C. Birkelo.

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**Crippled-Afflicted Child:** At a meeting held April 14, 1937, in the State Auditor General's Office, to discuss Fee Schedules A, B, C, D, the Filter Committee, and the appropriations for the Crippled-Afflicted Child, the following were present:

1. Members of the Finance Committee of the State Administrative Board: Auditor General George T. Gundry; Attorney General Raymond W. Starr; and Treasurer Theo. I. Fry.
2. The Crippled Children Commission: Messrs.

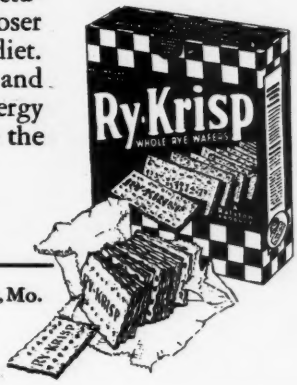
*(Continued on Page 340)*


*WHEN* a patient is sensitive to such common foods as wheat, milk or eggs, the task of explaining the necessary diet is a tedious one. And all the "musts" and "don'ts" at once are apt to be confusing.

Why not take a simpler way that's really *better* for your patient and for you? Just hand him a copy of this booklet—marking the section which applies to his particular sensitivity. There, plainly stated for easy and repeated reference, are exactly the foods he may or may not have—and even suggestions for safe and tempting recipes to enhance restricted menus.

You can distribute this booklet with perfect confidence. It is approved and used by many leading allergists, in private practice and allergy clinics. With the direction and assistance of recognized authorities, it was prepared in our laboratories, where years have been devoted to research and the study of allergy problems. These booklets are for professional use only. None are distributed to the laity.

Notice, when you examine this booklet, how frequently Ry-Krisp appears in the lists of accepted foods. That's because these tempting and delicious wafers are simply made of flaked whole rye, salt and water, double baked. They're perfectly safe—so inviting that they actually encourage closer adherence to the diet. For free samples and copies of the Allergy Diet booklet, use the coupon.

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*Name*_____ *M. D. Address*_____

*City*_____ *State*_____

*(This offer limited to residents of the United States and Canada)*

Hugh E. Van de Walker, Jos. Schnitzler, Dr. H. B. Fenech and Mrs. L. James Bulkley.

3. Judge Frank L. McAvinchey of Flint, representing the Probate Judges' Association.

4. Dr. W. L. Quennell of Highland Park, representing the Michigan Hospital Association.

5. Dr. E. R. Witwer, Harper Hospital, Detroit, representing the Michigan Association of Roentgenologists.

6. The following represented the Michigan State Medical Society: Drs. H. E. Perry, Henry Cook, F. H. Purcell, P. R. Urmston, G. C. Penberthy, and H. S. Collisi, and Executive Secretary Wm. J. Burns. Also present were Mr. H. H. Howett, Secretary of the Crippled Children Commission; Budget Director Geo. Thompson and Mr. Marsman of the Auditor General's Office.

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### Northern Tri-State Medical Society

The following are the officers for the ensuing year of the Northern Tri-State Medical Society: President—Dr. G. E. Jones, Lima, Ohio; vice president—Dr. J. N. Kelly, LaPorte, Ind.; secretary—Dr. Robert H. Elrod, Toledo, Ohio; treasurer—Dr. D. R. Brasie, Flint, Michigan.

*Counsellors*—Dr. W. H. Marshall, Flint, Michigan; Dr. H. E. Randall, Flint, Michigan; Dr. B. Hibbard, Lima, Ohio; Dr. O. P. Klotz, Findlay, Ohio; Dr. L. T. Rawles, Ft. Wayne, Indiana; Dr. G. O. Larson, LaPorte, Indiana.

The 1938 meeting will be held in Findlay, Ohio.

**The Advertisers' Messages** in The Directory Number deserve your especial attention, Doctor.

The list of advertisers on page 358 includes a number of new friends as well as the names of firms which for years have been coöperating with the Michigan medical profession.

Remember, all products advertised in THE JOURNAL of the M.S.M.S. are Council-approved.

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### Post Graduate Courses

The summer session of the Medical School of the University of Michigan will begin Monday, June 28, 1937, and close August 20. The following academic courses are available to physicians: anatomy, bacteriology, biological chemistry, and physiology. Among the clinical courses listed are dermatology and syphilology, internal medicine, neurology, obstetrics and gynecology, pathology, pharmacology—Materia Medica-therapeutics, and surgery, including surgical anesthesia. It will be seen that in addition to the usual clinical instruction, an opportunity will be afforded for refresher courses in non-clinical or academic branches. To quote from the announcement of the Department of Post Graduate Medicine:

"The privilege of electing two or more of the above described courses as a composite course is attracting many practitioners to attend the summer school session and proving to be a very satisfactory method for continued study in medicine. A full or any part of a day's schedule may be elected according to individual needs. Arrangements for these courses may be made with the Director of the Department of Postgraduate Medicine by mail or through personal interview."

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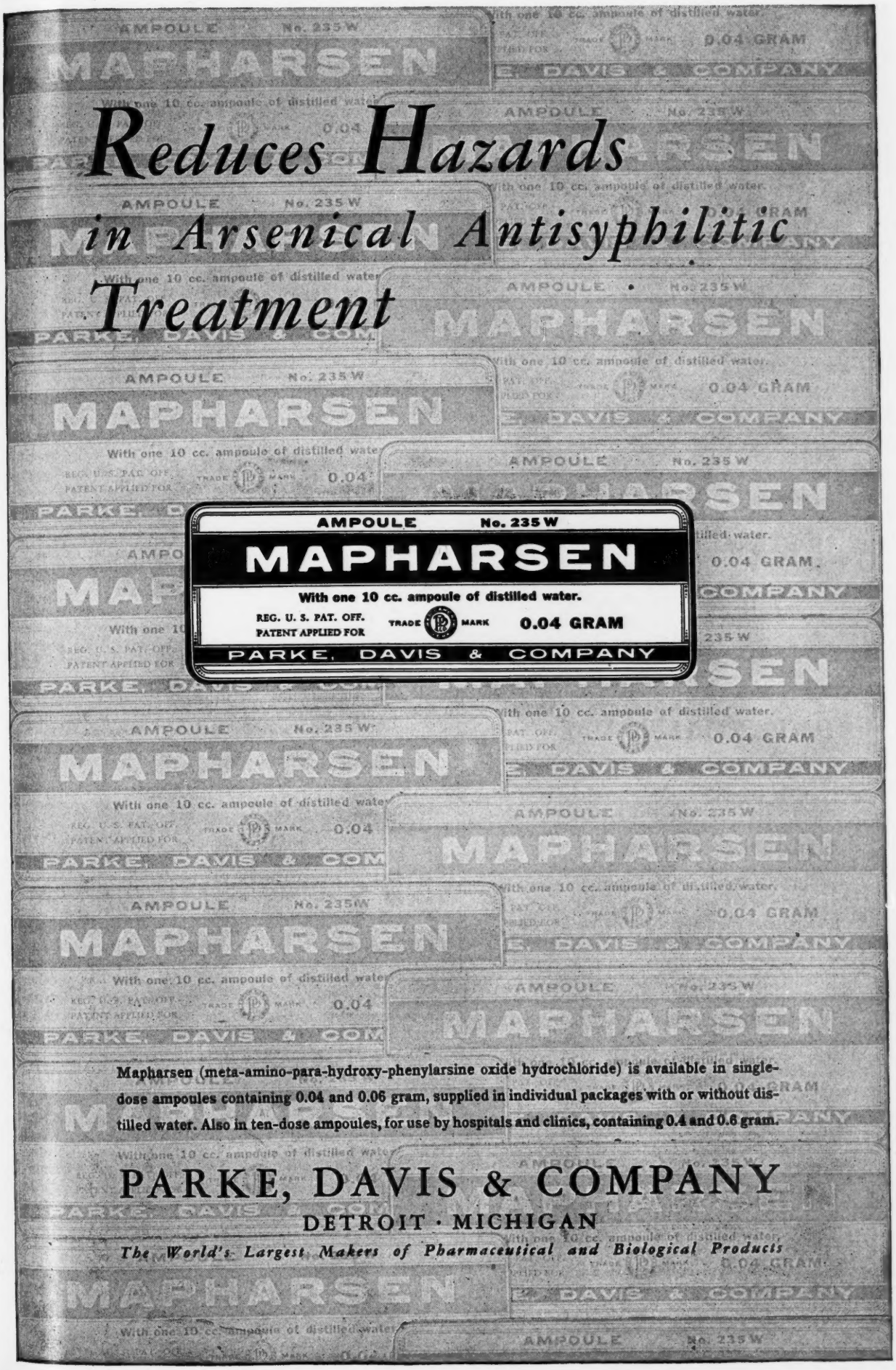
### American Medicine

The following Michigan physicians contributed letters, extracts from which comprised the two-volume work, *American Medicine, Expert Testimony out of Court,* by the American Foundation:

Doctors Emil Amberg, Detroit; J. A. Attridge, Port Huron; Frederick A. Baker, Pontiac; George Melze Baker, Parma; Robert H. Baker, Pontiac; F. C. Bandy, Sault Ste. Marie; W. E. Barstow, St. Louis; J. C. S. Battley, Port Huron; Arthur K. Bennett, Marquette; Neil Bentley, Detroit; Edward Jay Bernstein, Detroit; Andrew P. Biddle, Detroit; Alexander W. Blain, Detroit; Floyd E. Boys, Ann Arbor; James F. Breakey, Ann Arbor; Guy D. Briggs, Flint; H. B. Britton, Ypsilanti; J. D. Brook, Grand Rapids; Clark D. Brooks, Detroit; A. O. Brown, Detroit; James D. Bruce, Ann Arbor; Frederick J. Burt, Holly; L. G. Christian, Lansing; Frederick A. Coller, Ann Arbor; Ward E. Collins, Kalamazoo; Henry Cook, Flint; B. R. Corbus, Grand Rapids; C. Corley, Jackson; David Murray Cowie, Ann Arbor; Howard H. Cummings, Ann Arbor; George J. Curry, Flint; James E. Davis, Ann Arbor; J. H. Dempster, Detroit; William M. Donald, Detroit; V. H. Dumond, Bay City; Elmer L. Eggleston, Battle Creek; Herbert W. Emerson, Ann Arbor; W. L. Finton, Jackson; William Fowler, Detroit; C. B. Fulkerson, Kalamazoo; Lloyd H. Baston, Gladwin; E. H. Hanna, Detroit; John G. Harvey, Detroit; Wilfred Haughey, Battle Creek; R. C. Hildreth, Kalamazoo; B. Raymond Hoobler, Detroit; Harold A. Hume, Owosso; Robert Cary Jamieson, Detroit; Stephen H. Knight, Detroit; George M. Laning, Detroit; George L. LeFevre, Muskegon; Lavinia Gould MacKaye, Ann Arbor; James A. MacMillan, Detroit; Don Marshall, Ann Arbor; W. H. Marshall, Flint; Roy D. McClure, Detroit; Cary P. McCord, Detroit; E. M. McCoy, Grand Ledge; J. E. Meengs, Grand Rapids; R. C. Moehlig, Detroit; F. J. Moloney, Sault Ste. Marie; Esli T. Morden, Adrian; Irwin H. Neff, Detroit; Louis H. Newburgh, Ann Arbor; D. W. Patterson, Port Huron; Ralph H. Pino, Detroit; Julius H. Powers, Saginaw; H. E. Randall, Flint; Harry C. Saltzstein, Detroit; Stevens S. Sanderson, Detroit; A. H. Seibert, Detroit; E. A. Sharp, Detroit; Raymond D. Sleight, Battle Creek; R. R. Smith, Grand Rapids; Carl F. Snapp, Grand Rapids; William J. Stapleton, Detroit; John Sundwall, Ann Arbor; R. G. Tuck, Pontiac; Edward M. Vardon, Detroit; William R. Vis, Grand Rapids; John J. Walch, Escanaba; Carl V. Weller, Ann Arbor; Carl G. Wencke, Battle Creek; Leo E. Westcott, Kalamazoo; C. H. Westgate, Morenci; Alden Williams, Grand Rapids; U. J. Wile, Ann Arbor; Stuart Wilson, Detroit; Rollin C. Winslow, Battle Creek; I. V. Yale, Sault Ste. Marie.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# IN MEMORIAM

### Dr. Albert B. Walker

Dr. Albert B. Walker of Wyandotte, Michigan, died at his home, March 11th. He was born in Ontario sixty-four years ago, but has lived in Michigan since 1895. Dr. Walker was a graduate of the Detroit College of Medicine. He was a member of the Wayne County and Michigan State Medical Societies. He is survived by his wife and two brothers, Ernest W. Walker of Toronto, and Fred L. of Cleveland; three sisters, Miss Lillian Walker of Toronto, Mrs. W. C. Embury of Warsaw, N. Y., and Mrs. Mabel Oliver of Vancouver, B.C.

* * *

### Dr. Clarence H. Westgate

Dr. Clarence H. Westgate died in his home in Morenci, February 27, 1937, of cardiac disease. He was born in Williamstown, Michigan, September 28, 1880, and in 1887 moved with his parents to Detroit, where he attended the public schools and graduated from the Detroit College of Medicine in 1902.

He started practice in Adrian, but in 1903 went to Pittsburgh, Pa., where he accepted an appointment as surgeon with the Westinghouse Corporation. In 1908, he moved to Weston, Michigan, where he took up private practice until he moved to Morenci in 1925.

Dr. Westgate, always a student, contributed much to his local community as well as to the Lenawee County profession. He was devoted to his county medical society which he served as secretary for several years. At the time of his death, he was chief of staff of the Detwiler Hospital at Wauseon, Ohio, and physician in charge of the Lenawee County Tuberculosis Sanitarium. He was also an associate member of the medical staff of the Emma L. Bixby Hospital at Adrian.

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### Reading with Emphasis

(*The Journal-Lancet*)

Some people mark up the books they read, often underlining sentences and bracketing entire paragraphs. Destructive vandalism we say with one accord. But wait a minute; whose books are we talking about? If they belong to a library or some other person, that's one thing, and we still agree; but if they belong to the reader, that's quite another matter. Is there any better way of expressing approval or disapproval of the written word than by making just such notations of acceptance or rejection at the very time; and what else in heaven's name are book margins for?

We know an Osler of early vintage with pencilings all over the landscape depicting additional observations made by the great teacher on his hospital rounds the very day they were jotted down. Don't try to tell the owner of that book that it is disfigured. Not only does it have the added information but a wealth of inspirational value. It brings back the circumstances of the case, the very ward in which the patient lay, the charm of the master as he patted a shoulder here and took the arm of another there in conducting his group of students from one bed to another. That book is illuminated with precious memories. It is wear and all these little indications of use that testify to a book's worth and often enhance its value.

# THE DOCTOR'S LIBRARY

*Acknowledgment of all books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review, as expedient.*

PHYSICAL THERAPEUTIC METHODS IN OTO-LARYNGOLOGY. By Abraham R. Hollender, M.D., F.A.C.S. Associate in Laryngology, Rhinology, and Otology, University of Illinois College of Medicine; Fellow of the American Academy of Ophthalmology and Otolaryngology. With 189 illustrations. St. Louis: The C. V. Mosby Company, 1937.

This work is a compilation of chapters written by the author and ten others who are interested in some phase of treatment of otolaryngoloic disease by physical methods. While the above is true, one is impressed by the absence of exaggerated claims for physical therapy. The first part of the book is devoted largely to a discussion of the physics of the various modalities used in physical therapy. In part two, the application of these, and other physical methods, such as ionization, to the treatment of otolaryngologic disease is discussed. A short chapter is given to the discussion of tests involving the production of ocular nystagmus. Another to the use of hearing aids. The final chapters are devoted to the treatment of neoplastic diseases in this field, which includes a chapter by Chevalier L. Jackson on the use of the endoscope.

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THE DISEASES OF INFANTS AND CHILDREN. By J. P. Crozer Griffith, M.D., Ph.D., Emeritus Professor of Pediatrics in the University of Pennsylvania; Consulting Physician to the Children's Hospital, Philadelphia; Consulting Physician to St. Christopher's Hospital for Children; Consulting Pediatrist to the Woman's, the Jewish, and the Misericordia Hospitals, etc.; Corresponding Member of the Société de Pédiatrie de Paris: and A. Graeme Mitchell, M.D., B. K. Rachford Professor of Pediatrics, College of Medicine, University of Cincinnati; Medical Director and Chief of Staff of the Children's Hospital of Cincinnati; Director of the Children's Hospital Research Foundation; Director of Pediatric and Contagious Services in the Cincinnati General Hospital. Second Edition, Revised and Reset. 1153 pages with 293 illustrations. Philadelphia and London: W. B. Saunders Company, 1937. Cloth, $10.00 net.

Early chapters of the book are devoted to the childhood organism as a whole where attention is called to the many points of difference between it and the adult organism. Attention is given to the general question of breast feeding, weaning, and the employment of a wet nurse, together with a discussion of human milk and methods by which it may be altered. The question of substitute feeding is given ample consideration and the various foods other than milk that should be properly included in the diet of the infant or young child are discussed, giving their food value and methods of preparation. Various proprietary and patented foods are given consideration, so that the practitioner may know their value and the advisability of their use. The author calls attention to the various peculiarities of disease as found in children. He gives methods of examination that are found to be of advantage with these patients and a general discussion of symptomatology and of diagnosis as found useful by the pediatrist. A chapter is devoted to treatment and various procedures are outlined that have often been too sparsely covered in a book on disease of children.

The author gives a chapter to the diseases peculiar to the new born child. There is a section on the infectious diseases and another on diseases that are general, nutritional, or metabolic. Finally, the authors take up and discuss the various system diseases where the reader will find a full discussion of these diseases. Throughout the book there are many illustrations, radiographs, and charts, many of which are in color. At the end of each chapter there is a voluminous bibliography of references to the literature.

Altogether this work appears to cover the field of pediatrics in a very complete manner and it should be a valuable addition to the library of any physician interested in diseases of children.

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MEDICAL GREEK AND LATIN AT A GLANCE. By Walter R. Agard, B. Litt. (Oxon.), Professor of Greek, University of Wisconsin; with an introduction by C. H. Bunting, M.D., Professor of Pathology, University of Wisconsin. Second edition revised. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, New York, 1937. Price $1.50.

This is a very necessary work. It should be mastered thoroughly by the medical student, if not the premedical student. We find it valuable after a lapse of over thirty years since our freshman days. The book consists of word lists conveniently grouped, showing how both Latin and Greek words and roots enter into the formation of medical words. There is no dictionary subject to so much expansion as the various revisions of medical dictionaries. Most of the new words are formed from Latin and Greek, hence the importance of an acquaintance with this book which gives much in a comparatively small space. We would have preferred it had regular ten or twelve point type been used instead of typewriter type. However, this is a minor criticism.

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THE PHYSIOLOGICAL BASIS OF MEDICAL PRACTICE. A University of Toronto text in applied physiology. By Charles Herbert Best, M.S., M.D., D.Sc. (Lond.), F.R.S. (Canada), F.R.C.P. (Canada), Professor and Head of the Department of Physiology, Associate Director of the Connaught Laboratories, Research Associate in the Banting-Best Department of Medical Research, University of Toronto; and Norman Burke Taylor, M.D., F.R.S. (Canada), F.R.C.S. (Edin.), F.R.C.P. (Canada), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Professor of Physiology, University of Toronto. 1,684 pages. Price, $10. Baltimore: William Wood & Company, 1937.

There is much need for a work on the above subject. Textbooks on physiology as a science are numerous and of first class quality. Works on physiology, the purpose of which is to correlate science with the active practice of medicine are not so numerous. In many instances, the internist is called to diagnose conditions in which there is perversion of function with perhaps no marked organic changes. As the authors have said, the present work is to serve as a link between the laboratory and the clinic and as a textbook, to facilitate the teaching of physiology throughout the pre-clinic and clinical years of the undergraduate course in medicine. Too much cannot be said in favor of rationalizing the practice of clinical medicine. So intimately connected is function to structure of the organ that the authors have prefaced each chapter with an account of the morphology of the organs concerned. The book will be found invaluable to the internist in particular, and to the surgeon who looks upon his specialty as something more than skillful technic.

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*The Hebrew Physician* (Harofe Haivri) published by the Harofe Haivri Publishing Committee under the able editorship of Dr. Moses Einhorn, of New York, appeared in a new and highly augmented garb with 256 pages of reading matter after a silence of two years. It is published semi-annually. Typographically it is a masterpiece, aside from its intrinsic merit from a medical and literary standpoint. To the outside world which does not master the Hebrew, brief abstracts are appended in the English language. It is interesting to note the terminology which is derived from two sources:

*(Continued on Page 346)*

(1) Biblical and Talmudic and (2) modern transliteration from Latin and accepted standards.

Among the leading articles of this issue may be mentioned "New Ways in Treating Malaria" by Hillel Joffe, M.D., of Jerusalem; "New Methods of Treatment of Trichomonas Vaginitis" by L. Rosenthal, M.D.; "Clinical Contributions to the Question of Frontal Epilepsy" by L. Halpern, M.D.; "Obstetric Brachial Paralysis (Erb's Palsy)" by S. W. Boorstein, M.D.; "Sedimentation Rate and Composition of Blood Albuminates in Colitis" by M. Rachmilevitz, M.D.; "Acromegaly and Its Treatment by Roentgen Radiation" by A. Dubnove of Detroit, and many other articles of scientific import that space does not permit to enumerate in detail. The illustrations are well done and the bibliography is thoroughly scanned and properly annotated. *The Hebrew Physician* is a distinct and valuable contribution in the Hebrew language to Medical Science.

**What the Country Needs**

What this country needs isn't any more liberty but less people who take liberties with our liberty.

What this country needs isn't a job for every man but a real man for every job.

What this country needs isn't to get more taxes from the people but for the people to get more from the taxes.

What this country needs is not more miles of territory but more miles to the gallon.

What this country needs is more tractors and less detractors.

What this country needs is not more young men making speed but more young men planting spuds.

What this country needs is more paint in the old place and less on the young face.

What this country needs isn't a lower rate of interest on money but a higher interest in work.

What this country needs is to follow the footsteps of the fathers instead of the footsteps of the dancing master.

## ◆ Among Our Contributors ◆

**Dr. Leon M. Bogart** is a graduate of the Chicago School of Medicine and Surgery, 1913. He pursued postgraduate work in Vienna, 1923, 1928, also postgraduate courses at St. Bartholomew's Hospital, London, 1929. He is a member of the American Association for the study of Goiter, and attending surgeon, Hurley Hospital, St. Joseph's Hospital and Women's Hospital, Flint, Michigan. His practice is limited to consultation and general surgery.

* * *

**Dr. Moses Cooperstock** is Medical Director of the Northern Michigan Children's Clinic of the Children's Fund of Michigan, Marquette, Michigan. He is Assistant Professor of Pediatrics, University of Michigan Hospital, Ann Arbor, Michigan.

* * *

**Dr. Harold B. Rothbart** is a graduate of the University of Toronto, M.D., 1930. He was interne and resident, respectively, University Hospital, Ann Arbor; Resident, Cook County Children's Hospital, Chicago, 1933-34; Instructor in Pediatrics and Infectious Diseases, University of Michigan, 1934-36. He is now Instructor in Pediatrics, Wayne University, and Attending Pediatrist, Children's Hospital, Detroit, and is a diplomate, American Board of Pediatrics.

* * *

**Dr. William A. Scott** received his A.B. degree from Kalamazoo College in 1926 and his M.D. at the University of Michigan Medical School, 1930. He was psychiatric interne two years under Dr. G. F. Inch, the first year at the Traverse City State Hospital and the second year at the Ypsilanti State Hospital. Since then he has been Senior Assistant Physician Ypsilanti State Hospital. His specialty is psychiatry.

**Dr. Lowell S. Selling** is the Director of the Recorder's Court, Psychopathic Clinic, and Assistant Attending Neuropsychiatrist at Eloise Hospital, and also Adjunct Neuropsychiatrist at Harper Hospital. He is a graduate of Bellevue Hospital Medical College, and Ph.D. in Psychology from Columbia University. He is the author of a book "Diagnostic Criminology," and several other publications.

**Mr. Alan Canty** is Traffic Psychotechnologist of the Recorder's Court, Psychopathic Clinic. He was a graduate student in psychology of Western Reserve University, and at the same time was Psychological Examiner for the Cleveland Street Railway Company, investigating the capacities of motormen and bus drivers. Since 1930 he has been on the staff at the Psychopathic Clinic. He has written several papers on the examination of drivers.

* * *

**Dr. Loren W. Shaffer** is a graduate of the University of Michigan Medical School, 1917, and is on the staff of Receiving and Harper Hospitals in Dermatology.

* * *

**Dr. Fred Wise** is Professor of Clinical Dermatology and Syphilology, New York Post Graduate Medical School and Hospital; Chief of Clinic, Skin and Cancer Unit, New York Post Graduate Medical School and Hospital; Director, Department of Dermatology, French Hospital, New York City; Senior Attending Dermatologist, French Hospital and Montefiore Hospital; Consulting Dermatologist, St. Joseph Hospital, Far Rockaway and Beth-El Hospital, Brooklyn, New York; Editor of The Year Book of Dermatology and Syphilology, and Past Co-Editor of The Archives of Dermatology and Syphilology.

**RELISHED BY THE WISEST MEN**

The Federal Government transferred its gold to Fort Knox, Kentucky, with a fanfare of secrecy.—*Atlanta Journal.*

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Gas masks designed for civilians in war make humanity look as much like an ass as going to war proves we are.—*Dallas News.*

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Disagreeable old gentleman: "And this, I suppose, is one of those hideous caricatures you call 'modern art.'"

Art Dealer: "No, sir. That's just a mirror."—*Exchange.*

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Wife: "I've put your shirt on the clothes horse, Jim."

"What odds did you get?"—*Weekly News* (Auckland, New Zealand).

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"What's your time?" asked the old farmer of the brisk salesman.

"Twenty minutes after five. What can I do for you?"

"I want them pants," said the old farmer, leading the way to the window and pointing to a ticket marked, "Given away at 5.20."—*Christian Observer.*

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Barber: "How is the razor, sir? Does it go easy?"

Man: "Well, that depends on the operation. If you're shaving me it goes hard, but if you're merely skinning me it goes tolerable easy."—*Sheboygan (Wis.) Press.*

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The boss related an original joke to the various employees in the office, who all laughed uproariously—except Jones.

"You don't find my little joke very amusing, Mr. Jones?" asked the boss ominously.

"I don't have to—I'm leaving tomorrow," came the reply.—*Nebelspalter,* Zofingen.

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Aunt Agatha dropped in for a chat.

"Oh Auntie, how ugly you are!" said her little niece.

"But Eva," cried her mother, horrified, "How can you say such a thing?"

"I just said it as a joke, Mama!"

"It would have been a much better joke if you had said, 'Oh Auntie, how pretty you are,'" chided her mother.—*Neues Wiener Journal,* Vienna.

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**A Highbrow:** Steinmetz of General Electric fame, defined a highbrow as "any person educated beyond his intelligence."

—*Kitchener Record.*

**Standing up on the Job:** Unrest is spreading in the United States. There are now rumors of a stand-up strike of sedentary workers.

—*Punch.*

**The Stork's Bill:** "The stork has a particularly long bill," observes a naturalist. Every young father knows that.

—*Punch.*

**Probably He Trudged Along:** An Australian during the war tried to enlist. He was refused on medical grounds, on account of bad feet. Next morning he presented himself once more before the doctor.

"It's no use, I can't take you. You couldn't stand the marching," said the physician. "But why are you so insistent?"

"Well, doc," said the other, "I walked 187 miles to get here, and I hate to walk all the way back!"

—*Moncton Transcript.*

## COUNTY SOCIETIES

### BRANCHES OF THE MICHIGAN STATE MEDICAL SOCIETY

| COUNTY SOCIETY | PRESIDENT | SECRETARY | MEETINGS | |
|---|---|---|---|---|
| | | | Regular | Annual |
| Allegan | G. H. RIGTERINK Hamilton | M. B. BECKETT Allegan | 1st Tuesday | 1st Tuesday December |
| Alpena-Alcona-Presque Isle | DR. C. A. CARPENTER Onaway | HAROLD KESSLER Alpena | Last Thursday 6:00 p. m. | Last Thursday December |
| Barry | H. S. WEDEL Freeport | G. F. FISHER Hastings | 2nd Thursday 8:00 p. m. | 1st Thursday January |
| Bay-Arenac-Iosco-Gladwin | DR. A. D. ALLEN Bay City | A. L. ZILIAK Bay City | 2nd and 4th Wednesday (except July, Aug., Sept.) 6:00 p. m. | 2nd Wednesday December |
| Berrien | R. MEADER New Buffalo | A. F. BLIESMER St. Joseph | 2nd Wednesday or Thursday | 2nd Wednesday or Thursday, December |
| Branch | BERT W. CULVER Coldwater | F. S. LEEDER Coldwater | 3rd Thursday 6:30 p.m. | 3rd Thursday December |
| Calhoun | C. W. BRAINARD Battle Creek | WILFRID HAUGHEY Battle Creek | 1st Tuesday (except July and Aug.) | 1st Tuesday December |
| Cass | S. E. BRYANT Dowagiac | K. C. PIERCE Dowagiac | 2nd Wednesday or Thursday | December 15 |
| Chippewa-Mackinac | F. J. MOLONEY Sault Ste. Marie | GEO. A. CONRAD Sault Ste. Marie | 1st Friday | 1st Friday December |
| Clinton | A. C. HENTHORN St. Johns | T. Y. HO St. Johns | 1st Tuesday 7:30 p. m. | 1st Tuesday October |
| Delta | H. Q. GROOS Escanaba | NATHAN J. FRENN Bark River | 1st Thursday 8:30 p.m. | December 2 |
| Dickinson-Iron | D. R. SMITH Iron Mountain | W. H. HURON Iron Mountain | 1st Thursday 6:30 p. m. | 1st Thursday December |
| Eaton | H. A. MOYER Eaton Rapids | THOMAS WILENSKY Eaton Rapids | Last Thursday | No set date |
| Genesee | ALVIN N. THOMPSON Flint | C. W. COLWELL Flint | 2nd and 4th Tuesday (except July and August) | 2nd Tuesday November |
| Gogebic | C. C. URQUHART Ironwood | F. L. S. REYNOLDS Ironwood | 3rd Tuesday | 3rd Tuesday December |
| Grand Traverse-Leelanau-Benzie | DWIGHT GOODRICH Traverse City | E. F. SLADEK Traverse City | 1st Tuesday 8:00 p. m. | 1st Tuesday December |
| Gratiot-Isabella-Clare | KENNETH P. WOLFE Breckenridge | RICHARD L. WAGGONER St. Louis | 3rd Thursday | 3rd Thursday December |
| Hillsdale | LUTHER W. DAY Jonesville | E. G. McGAVRAN Hillsdale | 1st Tuesday | 1st Tuesday January |
| Houghton-Baraga-Keweenaw | L. E. COFFIN Painesdale | C. A. COOPER Hancock | 1st Tuesday | 1st Tuesday January |
| Huron-Sanilac | F. O. KIRKER Sandusky | E. W. BLANCHARD Deckerville | 2nd Thursday | 2nd Thursday December |
| Ingham | MILTON SHAW Lansing | R. J. HIMMELBERGER Lansing | 3rd Tuesday 6:30 p. m. | 3rd Tuesday December |
| Ionia-Montcalm | A. I. LAUGHLIN Clarksville | JOHN J. McCANN Ionia | 2nd Tuesday 7:00 p. m. | 2nd Tuesday December |
| Jackson | E. D. CROWLEY Jackson | H. W. PORTER Jackson | 3rd Tuesday 6:30 p. m. | 3rd Tuesday December |
| Kalamazoo-Van Buren | W. G. HOEBEKE Kalamazoo | L. W. GERSTNER Kalamazoo | 3rd Tuesday 7:30 p. m. | 3rd Tuesday December |
| Kent | A. B. SMITH Grand Rapids | J. M. WHALEN Grand Rapids | 2nd and 4th Wednesday 8:15 p. m. | 2nd Wednesday December |
| Lapeer | H. M. BEST Lapeer | CLARK DORLAND Lapeer | 2nd Thursday | December or January |
| Lenawee | A. W. CHASE Adrian | ESLI T. MORDEN Adrian | 3rd Tuesday | 3rd Tuesday December |
| Livingston | H. L. SIGLER Howell | DUNCAN C. STEPHENS Howell | 1st Friday 6:30 p. m. | 1st Friday December |
| Luce | GEO. F. SWANSON Newberry | A. T. REHN Newberry | 1st Tuesday 8:00 p. m. | 1st Tuesday December |
| Macomb | JOSEPH N. SCHER Mt. Clemens | R. F. SALOT Mt. Clemens | 1st Monday 12:00 noon | 1st Monday December |
| Manistee | KATHRYN BRYAN Manistee | C. L. GRANT Manistee | Every Monday noon | 3rd Thursday January |
| Marquette-Alger | E. R. ELZINGA Marquette | D. P. HORNBOGEN Marquette | No set date | December |
| Mason | W. S. MARTIN Ludington | CHAS. A. PAUKSTIS Ludington | No set time | No set time |
| Mecosta-Osceola | THOMAS P. TREYNOR Big Rapids | GLENN GRIEVE Big Rapids | 2nd Tuesday | 2nd Tuesday December |



*(Continued on Page 352)*

*(Continued from Page 350)*

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|---|---|---|---|---|
| Menominee ..... | A. R. PETERSON<br>Daggett | J. K. PARISH<br>Hermansville | 3rd Thursday | 3rd Thursday<br>December |
| Midland ..... | WILBUR D. TOWSLEY<br>Midland | N. C. GREWE<br>Midland | | |
| Monroe ..... | O. E. PARMELEE<br>Lambertville | FLORENCE AMES<br>Monroe | 3rd Thursday<br>(except July<br>and Aug.) | 3rd Thursday<br>October |
| Muskegon ..... | C. B. MANDEVILLE<br>Muskegon | L. E. HOLLY<br>Muskegon | Last Friday<br>6:00 p. m. | 2nd Friday<br>December |
| Newaygo ..... | A. C. TOMPSETT<br>Hesperia | W. H. BARNUM<br>Fremont | As called | 3rd Tuesday<br>December |
| Northern Mich.<br>(Antrim.-<br>Charlevoix-<br>Emmet-<br>Cheboygan) ..... | E. A. CHRISTIE<br>Cheboygan | GILBERT B. SALTONSTALL<br>Charlevoix | 2nd Thursday<br>6:00 p.m. | 2nd Thursday<br>December |
| Oakland ..... | PALMER E. SUTTON<br>Royal Oak | O. O. BECK<br>Birmingham | 3rd Tuesday<br>(except July<br>and Aug.) | 3rd Tuesday<br>December |
| Oceana ..... | V. W. JENSEN<br>Shelby | FRED A. REETZ<br>Shelby | No definite date<br>set | December |
| O.M.C.O.R.O.<br>(Otsego-<br>Montmorency-<br>Crawford-Oscoda-<br>Roscommon-<br>Ogemaw) ..... | R. J. BEEBY<br>West Branch | C. G. CLIPPERT<br>Grayling | On call | December |
| Ontonagon ..... | C. F. WHITESHIELD<br>Trout Creek | E. J. EVANS<br>Ontonagon | On call | January |
| Ottawa ..... | W. B. BLOEMENDAL<br>Grand Haven | K. N. WELLS<br>Spring Lake | 2nd Tuesday<br>Noon | 2nd Tuesday<br>December |
| Saginaw ..... | L. C. HARVIE<br>Saginaw | H. C. WALLACE<br>Saginaw | 3rd Tuesday<br>8:30 p. m. | 3rd Tuesday<br>December |
| Schoolcraft ..... | A. R. TUCKER<br>Manistique | GEO. A. SHAW<br>Manistique | On call | January 10 |
| Shiawassee ..... | C. M. WILCOX<br>Owosso | R. J. BROWN<br>Owosso | 3rd Thursday<br>Noon | 3rd Thursday<br>December |
| St. Clair ..... | H. O. BRUSH<br>Port Huron | GEO. M. KESL<br>Port Huron | 1st and 3rd<br>Tuesdays<br>Oct. to June | 3rd Tuesday<br>December |
| St. Joseph ..... | C. G. MILLER<br>Sturgis | J. W. RICE<br>Sturgis | 1st Thursday<br>6:30 p. m. | 1st Thursday<br>March |
| Tuscola ..... | H. A. BARBOUR<br>Mayville | B. H. STARMANN<br>Cass City | 2nd Thursday<br>8:00 p. m. | 2nd Thursday<br>November |
| Washtenaw ..... | REED NESBIT<br>Ann Arbor | L. J. JOHNSON<br>Ann Arbor | 2nd Tuesday | 2nd Tuesday<br>December |
| Wayne ..... | T. K. GRUBER<br>Eloise | C. E. UMPHREY<br>Detroit | Every Monday<br>8:45 p. m.<br>(Oct. to May,<br>incl.) | 3rd Monday in<br>May |
| Wexford-<br>Kalkaska-<br>Missaukee ..... | GREGORY MOORE<br>Cadillac | B. A. HOLM<br>Cadillac | Last Thursday | Last Thursday<br>October |

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**All communications relative to exchanges, books for review, manuscripts, should be addressed to J. H. Dempster, M.D., 5761 Stanton Avenue, Detroit, Michigan.**

**All communications regarding advertising and subscriptions should be addressed to William J. Burns, LL.B., Executive Secretary, 2642 University Avenue, St. Paul, Minnesota, or 2020 Olds Tower, Lansing, Michigan. Telephone, 5-3355.**

**NOTICE TO CONTRIBUTORS**

**Owing to the limitation of space, preference will be given brief articles.**

**Manuscripts should be typewritten, double spaced, on one side of white paper 8½x11 inches. There should be a margin of 1½ inches on the left side of page.**

**All photographs should be clearly focused prints on glossy paper (do *not* send negatives). The standard 8x10 or 5x7 size prints are recommended.**

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● The summer traveler or camper frequently accepts chances of infection by *Endamoeba histolytica*. Unguarded water supplies, food prepared by unknown hands, the unavoidable presence of the housefly—all contribute to the possibility of ingestion of the cysts of this organism.

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